

MONSF 12.5 VI

Monsanto

LAW DEPARTMENT

Monsanto Company
800 N. Lindbergh Boulevard
St. Louis, Missouri 63167
Phone: (314) 694-1000

December 7, 1990

VIA FEDERAL EXPRESS

Charles Ordine
Assistant Regional Counsel
U.S. EPA, Region X
Seattle, WA 98101

Re: Monsanto Soda Springs Plant--
Good Faith Offer to Perform Remedial
Investigation/Feasibility Study(RI/FS)

Dear Mr. Ordine:

In response to U.S. Environmental Protection Agency (U.S. EPA) correspondence on this matter dated October 17, 1990 and as noted in our initial response dated October 31, 1990, Monsanto is interested in exploring with the U.S. EPA the possibility of an Administrative Order Consent (AOC) for performance of the RI/FS at Monsanto's Soda Springs, Idaho Plant. As you are no doubt aware, a technical meeting has already been held on this subject, as well as several informal discussions. Furthermore, substantial information about Monsanto's Soda Springs Plant from earlier investigations has already been provided to U.S. EPA. We understand that this material is presently under review by U.S. EPA's oversight contractor, SAIC.

As the next step towards the development of an appropriate AOC for Monsanto's performance of this RI/FS, we now provide the enclosed good faith offer pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. 9622:

1. While Monsanto continues to reserve all its legal rights and defenses and does not waive any ability to dispute U.S. EPA's findings of fact, conclusions of law and legal authority in this matter, Monsanto is prepared to conduct an RI/FS consistent with the enclosed draft AOC and Statement of Work (SOW). While many issues obviously remain to be resolved, our review of these documents, as well as the meetings and discussions held to date, indicate ample basis for fruitful negotiations;

2. Monsanto's response to U.S. EPA's draft AOC is the attached "red-lined" version (Attachment 1). This shows the proposed sections to be deleted, which are lined out, and those sections to be added, which are in bold. The paragraph numbers were not altered in this draft in order to facilitate reference to the original document. Perhaps the most significant development is the movement of the technical tasks into the SOW. As discussed in the earlier technical meeting, the intent is for all technical tasks and requirements to be identified in one document without the need to flip between the SOW and the text of the AOC.

The sequence of the proposed work breakdown structure in Section I of the SOW is that agreed to in the technical meeting, and it optimizes use of existing site data by providing early substantive and comprehensive RI and FS deliverables. These deliverables will update EPA on current site condition and will serve as valuable tools with which to effectively focus the planning of subsequent RI/FS activities that will be needed to bring the Soda Springs Plant into compliance with the NCP. The elements of the work breakdown structure were developed to ensure compilation and evaluation of that information needed to comply with the NCP, and were derived from the concepts put forth by EPA in current RI/FS guidance.

Deliverables have been consolidated to minimize document production, review, revision, and approval efforts, and to maximize document utility. Specific instances of such consolidation are:

- Sampling and Analysis Plan--The Quality Assurance Project Plan portion of the Sampling and Analysis Plan will be appended to the Phase II Remedial Investigation/Feasibility Study Work Plan. A separate Field Sampling Plan will not be generated, but all the elements of such a plan will be addressed within the Work Plan (in either the main body of the plan or within the Quality Assurance Project Plan, as appropriate).
- Technical Memorandum on Modeling of Site Characteristics--Modeling efforts for the second phase of the RI will be proposed and discussed in the Phase II Remedial Investigation/Feasibility Study Work Plan.
- Identification of Candidate Technologies Memorandum--Potential remedial technologies will be identified within the Remedial Alternatives Development and Preliminary Screening Memorandum.
- Treatability Testing Statement of Work--Any necessary treatability investigation activities will be identified and outlined, through the data needs

reevaluation, in the Remedial Alternatives Development and Preliminary Screening Memorandum.

- Treatability Testing Work Plan--Any treatability investigation work will be described in the Phase II Remedial Investigation/Feasibility Study Work Plan.
- Treatability Testing Sampling and Analysis Plan--Any treatability investigation sampling and analysis issues will be addressed within the Phase II Remedial Investigation/Feasibility Study Work Plan.
- Treatability Study Health and Safety Plan--Health and safety issues related to any treatability investigation activities will be addressed within the Phase II Remedial Investigation/Feasibility Study Safety and Health Plan.
- Treatability Study Evaluation Report--The results of any treatability investigation activities will be reported within the Preliminary Draft Remedial Investigation Report and the Draft Remedial Investigation Report.
- Memorandum on Remedial Action Objectives--Remedial action objectives will be initially identified and reported within the Preliminary Site Characterization Summary Report. Such objectives will be refined and reported in the Remedial Alternatives Development and Preliminary Screening Memorandum, the Preliminary Draft Remedial Investigation Report, the Draft Remedial Investigation Report, the Comparative Analysis Report, and the Draft Feasibility Study Report.

The performance requirements in Section II of the SOW are aimed at focusing the RI/FS while ensuring compliance with the NCP. We appreciate that EPA will regard this section as critical, and understand a potential need for modification to ensure that all regulatory concerns are addressed. For example, EPA may need to cite additional specific portions of the NCP, or add specific references to additional guidance documents. As mentioned in the technical meeting, Monsanto has no objection to referencing pre-NCP-modification guidance, as long as it is done in a manner that does not jeopardize project focus or consistency with the NCP. (Section IV of the SOW provides specific references to the literature cited within the performance requirements.)

Section III of the SOW contains the scheduling criteria agreed to in the technical meeting. A conceptual time line is provided in Figure 1 for convenience. This time line assumes a 9-month duration for field work (which is to be initiated in the spring), data evaluation, and development of the Preliminary Draft Remedial Investigation Report. However, the actual duration for such activities will, of

course, be specified in the EPA-approved Phase II Remedial Investigation/Feasibility Study Work Plan.

3. As for our technical capability to perform the RI/FS, Monsanto is involved in a number of RI/FS projects, as well as Superfund cleanups, throughout the nation. In some of these, we are the sole or major PRP and at other sites we are part of steering committees. Monsanto's internal engineering, hydrogeology and other technical staff will be supplemented in this matter by Golder Associates Inc., 4104 148th Avenue, N.E., Redmond, WA 98052. Golder Associates Inc. has previously performed substantial investigations at the site over the past several years. As mentioned above, their work has already provided a database upon which to build for the performance of this RI/FS. The qualifications of Golder Associates Inc. and its personnel are attached (Attachment 2).
4. Monsanto's financial capability to finance this RI/FS is demonstrated by its position as a Fortune 100 company with assets of \$8.6 billion dollars based upon on annual sales of \$8.7 billion dollars and profits of \$679 million dollars. An extract of Monsanto's most recent 10-K filing with the United States Security and Exchange Commission is attached (Attachment 3). We will be happy to provide a full copy of this filing upon request.
5. Monsanto is willing to reimburse EPA for those costs which U.S. EPA incurs in overseeing the conduct of the RI/FS, as indicated in the attached AOC.
6. Monsanto's primary representatives in this matter will consist of:
 - a. Robert L. Geddes, Monsanto Soda Springs Plant, Highway 34 North, Soda Springs, ID 83276, 208/547-3391.
 - b. Stephen P. Krchma, Associate Environmental Counsel, Monsanto Company, 800 North Lindbergh Blvd., St. Louis, MO 63167, 314/694-1278.
 - c. Other management, technical and legal personnel will also participate to assure timely resolution of all pertinent issues.

As previously arranged, we will meet with John Meyers and yourself on December 17, 1990 at 9:00 a.m. at your offices in Seattle. In the meanwhile, if you have any questions about any aspect of Monsanto's good faith offer in this matter, please do not hesitate to contact us. We look forward to the discussions on December 17, 1990 as an opportunity to resolve a great many of the specific issues indicated herein. If there are any more

general concerns which can be addressed before that time, we could do so over the phone. I can be reached at 314/694-1278.

Very truly yours,

Stephen P. Krchma
Associate Environmental
Counsel

enc. *(Attachments*
1, 2 + 3

cc: Dean Nygard, IEHW-DEQ
Charles Polityka, U.S. Dept. of Interior

12/7/90

DRAFT - SUBJECT TO FURTHER GOVERNMENT REVIEW

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10

IN THE MATTER OF:

MONSANTO CHEMICAL COMPANY
(SODA SPRINGS) SITE

MONSANTO COMPANY,

RESPONDENT

Proceeding Under Sections 104, 122(a),
and 122 (d) (3) of the Comprehensive
Environmental Response, Compensation,
and Liability Act as amended,
42 U.S.C §§ 9604, 9622(a),
9622(d) (3).

U.S. EPA Docket No. _____

ADMINISTRATIVE ORDER ON CONSENT
FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY

I. INTRODUCTION

1. This Administrative Order on Consent ("Consent Order") is issued entered into voluntarily by the United States Environmental Protection Agency ("EPA") to and the above-captioned Respondent to provide for the performance and preparation of a Remedial Investigation and Feasibility Study ("RI/FS") for the above-captioned Site; and for the reimbursement of EPA for all costs incurred by EPA in connection therewith as specified herein.

II. JURISDICTION

2. This Consent Order is issued under the authority vested in the President of the United States by Sections 104, 122(a) and

122(d)(3) of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), as amended, 42 U.S.C. §§ 9604, 9622(a), 9622(d)(3). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (1987); further delegated to the EPA Regional Administrators on September 13, 1987, by EPA Delegation No. 14-14-C; and redelegated by the Regional Administrator to EPA Region 10 Director, Hazardous Waste Division.

3. Respondent agrees to undertake all activities required by this Consent Order. In any action by EPA or the United States to enforce this Consent Order, Respondent consents to, and agrees not to contest, the authority or jurisdiction of EPA, in accordance with the delegations set forth above, to issue or enforce this Consent Order, ~~and agrees not to contest the validity of this Order or its terms.~~

III. PARTIES BOUND

4. This Consent Order shall apply to and be binding upon Respondent, its successors, and assigns. Respondent shall further be responsible for ensuring that all of its officers, directors, ~~principals, subsidiaries,~~ employees, agents, contractors, consultants, subcontractors, attorneys, and any other persons or entities acting for or on behalf of Respondent with respect to the implementation of this Consent Order, to fully comply with this Consent Order. ~~Where this Order creates duties upon Respondent, any directory language, including the words "will," or "shall", when used in reference to any action to~~

~~be taken by EPA, is intended only, and shall be interpreted, as condition(s) precedent to Respondent's duty(s), and not as any duty of EPA to act, or to act within a specified time period.~~

The signatory to this Consent Order on Respondent's behalf certifies that he or she is authorized to execute and legally bind Respondent to this Consent Order. No change in ownership, business organization, or other status of Respondent, or of any portion of the Site, shall alter Respondent's duties under this Consent Order.

5. Respondent shall provide a copy of this Consent Order to any subsequent owners or successors in interest before any ownership rights or stock or assets in a corporate merger or acquisition involving Respondent ~~or its subsidiary,~~ the Monsanto Chemicals Company (Soda Springs) site, are transferred.

~~Respondent shall notify EPA at least thirty (30) days prior to any such transfer. Respondent shall provide a copy of this Order~~ ensure that a copy of this Consent Order is provided to all contractors, subcontractors, laboratories, and consultants retained to perform any work under this Consent Order ⁷ within fourteen (14) days after the effective date of this Consent Order, or the date such services are retained, whichever is later.

IV. STATEMENT OF PURPOSE

6. The objectives of this Consent Order are: (a) to determine the nature and extent of contamination at and from the Site, if

any, and the nature and extent of any threat to the public health, welfare, or the environment, if any, presented by the release or threat of release of hazardous substances, pollutants or contaminants at or from the Site, by conducting a remedial investigation; (b) to determine and evaluate appropriate alternatives for remedial action to prevent, mitigate or otherwise respond to any the release or threat of release of hazardous substances, pollutants, or contaminants at or from the Site, if any, by conducting a feasibility study; and (c) to provide for recovery by EPA of its response and oversight costs incurred with respect to the Site and the implementation of this Consent Order, as specified herein. The objective of the RI/FS process is not the unobtainable goal of removing all uncertainty but rather to gather information sufficient to support an informed risk management decision regarding which remedy appears to be most appropriate for the Site. Activities conducted in compliance with this Consent Order shall be deemed in compliance with the NCP.

7. The activities required by this Consent Order are subject to approval by EPA and shall are designed to provide all the necessary and appropriate information for the RI/FS pursuant to the attached Statement of Work (SOW), and for the preparation by EPA of a Record of Decision ("ROD") in accordance with the requirements of CERCLA, as amended, and consistent with the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), 40 C.F.R. Part 300, as amended. The activities

conducted pursuant to this Consent Order shall be conducted in compliance with all applicable EPA regulations. ~~guidances, policies, and procedures.~~

V. EPA'S FINDINGS OF FACT

8. The Monsanto Chemical Company (Soda Springs) site (hereinafter and hereinbefore referred to as the "Site") includes an elemental phosphorus plant (the "Plant") located approximately one (1) mile north of the City of Soda Springs, Idaho on an approximately 540 acre property owned and operated by Respondent, ~~its subsidiaries or predecessors since 1952, in portions of Sections 29, 30, 31, and 32, Township 8 South, Range 42 East of the Boise Meridian, bordering State Highway 34. Respondent purchased the Plant property from various grantees in 1951 and 1952, who had used it for agricultural and domestic purposes. No other industrial or significant activity is known to have occurred at or on the Plant property. For the purpose of this Consent Order, the Site encompasses those defined areas by the NCP, Section 300.5. the areal extent of contamination and all suitable areas in close proximity to the contamination deemed necessary by EPA for implementation of any response action.~~

9. Respondent is a corporation organized and existing under the laws of the State of Delaware, with principal offices in St. Louis, Missouri, and doing business in the State of Idaho. ~~Monsanto Chemicals Company is a corporation organized and~~

~~existing under the laws of the State of Idaho, and a wholly owned subsidiary of Respondent.~~

10. The Plant is approximately twelve (12) miles south of the Blackfoot Reservoir, and 2000 feet east of Soda Creek in a broad semi-arid rural valley with mixed agricultural, residential, and industrial uses. Soda Creek is the main drainage system near the Plant. ~~It flows southward into the Soda Point Reservoir which abuts the southeast corner of the city of Soda Springs. Soda Creek is a major tributary of Bear River which flows in a generally southwesterly direction from Soda Springs. The basalt of the Blackfoot Lava Field, fed in part by the Blackfoot Reservoir, is the principal water formation in the area. Its water is used for domestic, livestock, irrigation, municipal, commercial and industrial purposes. Soda Springs obtains its municipal water supply from three (3) springs which issue from this aquifer. Ground water drawn from public and private wells within three (3) miles of the Plant provides potable water to a population of approximately 3,500 to 4,000 people, and is used to irrigate approximately 4,700 acres of farmland. Total depths of domestic wells range between 19 and 400 feet below ground surface. Plant operations use on-site well water. There is no known alternate supply of potable water in the area. The groundwater in the upper and lower basalt zones generally flows to the south. However, previous studies suggest that a complex hydrogeological environment exists in the Soda Springs area. Faulting and regional ground water discharge areas influence the~~

~~water flow pattern, and to date, local effects have not been precisely determined. The folding, faulting, and rugged topography have created a myriad of complex, discrete flow systems. Hydraulic connections among area potable and non-drinking ground water sources via basalt fractures and joints are probable.~~

11. In April 1988, following an inspection of the Site, including sampling and analysis, and a review of prior investigations, a Site Inspection Report ("Report") was prepared by an EPA contractor. The Report concluded that the site may be contaminated by various metals, ions and substances. Among other things, the Report concluded: A. Ground water under the Plant property is contaminated by various metals and ions. Elevated levels of hazardous substances including: cadmium, chromium, manganese, selenium, arsenic, vanadium, zinc, nickel, phosphorus, fluoride, chloride, and sulfate were detected in monitoring wells on the Plant property. Both the upper and lower basalt zones evidenced contamination.

B. The sources of the contaminants in the upper basalt zone included the underflow solids pond, the northwest pond and the hydroclarifier. The plumes generally follow the predominant south-southeast ground water flow direction. A fluoride plume is the most widely dispersed. Selenium, vanadium, zinc, and sulfate were also detected beyond the Plant property.

C. None of the contaminants in the upper basalt zone were detected immediately southeast of Plant production wells. The

~~cone of depression created by numerous on-Site wells appears to intercept further southeasterly plume transport.~~

~~D. The contaminants detected in the lower basalt zone include cadmium, selenium, fluoride, chloride and sulfate. The plumes appear to extend southeast from the old underflow solids area, and are generally smaller and less concentrated than those in the upper basalt zone.~~

~~E. A separate plume of chloride, sulfate, and vanadium may exist under the southeastern portion of the Plant property, which may originate east of the Plant property.~~

~~F. The Plant property includes landfills containing hazardous substances including thirty two (32) tons of vanadium pentoxide, asbestos containing insulation, construction debris and other wastes. It was not apparent that these landfills were a source of contamination detected at the Site.~~

~~12. The Report also identified the following eight (8) waste streams produced by Respondent's Plant operations, some of which have contributed, and may be continuing to contribute, to the contamination of the Site:~~

~~A. Calcium Silicate Slag. This slag constitutes the greatest quantity of waste produced by the Plant. The molten slag is tapped from the base of the furnaces and poured out to cool in piles which cover a large portion of the Plant property, and are greater than 150 feet in height.~~

~~B. Ferrophos Slag. This slag is cooled in separate piles and stored on a concrete pad. It is later sold to Kerr McGee Chemical corporation for recovery of its vanadium content.~~

~~C. Kiln Dust Slurry. A wet scrubber is used to remove particulates from the rotary kiln exhaust gas. The resultant slurry is sent to a hydroclarifier for settling and then to a filter for dewatering. Excess water is recycled back to the wet scrubber. Occasionally, the now bentonite-lined underflow solids ponds are used for dewatering when the filter is not in operation. Previous ponds were unlined. In 1985, the hydroclarifier was discovered to be leaking and was replaced with a new system which includes a leachate collection system and synthetic liner.~~

~~D. Phossy Water. Elemental phosphorus is condensed in a spray tower. The liquid phosphorus is then sent to storage and rail cars under a water seal. The spray tower, storage and rail car displacement waters directly contact phosphorus, and are termed "phossy water". All phossy waters are sent to the hydroclarifier for lime treatment to remove residual elemental phosphorus. The bentonite-lined phossy water surge pond is for surge capacity when the hydroclarifier is unavailable.~~

~~E. Electrode Seal Water. This separate water system prevents furnace gases from escaping at the point where the electrodes enter the furnace. The water is cooled in the now bentonite lined seal water pond prior to being recycled.~~

~~F. Coke and Quartzite Slurry. Coke and quartzite dust resulting from the drier and scrubber were formerly settled out in a slurry pond. This dust is now collected in a baghouse. The former slurry pond is currently inactive and is dry, containing only sediment.~~

~~G. Non-contact Plant Cooling Water. The water is taken from Plant production wells, used to cool equipment, and discharged into Soda Creek via an effluent discharge stream. Prior to discharge, it passes through a settling pond for particulate removal. The temperature of the discharge water is permitted under Section 402 of the Federal Water Pollution Control Act, 42 U.S.C. 1342.~~

~~H. Waste Oils. Since 1977, waste solvents generated by the facility have been containerized and removed for recycling. Prior to 1977, spent solvents were commonly mixed with waste oil and used as a dust suppressant on Plant property roads.~~

13. In 1985, Respondent's ~~contractor~~ consultant, Golder Associates, conducted a hydrogeological investigation of the Plant property. As a part of the investigation, thirty-one (31) monitoring wells were installed around the Plant property to supplement seven (7) existing wells. Pump tests were performed on several monitoring wells and three (3) production wells. Water level measurements and water quality sampling were performed on all monitoring wells, production wells and four (4) nearby domestic wells, and five springs. Respondent has supplied EPA with data from the Golder investigation. ~~A conclusion of the~~

~~investigation was that both basalt zones beneath the Plant property exhibited elevated concentrations of hazardous substances including: fluoride, cadmium, selenium, chloride, sulfate, and vanadium. In response to the Golder investigation and other information,~~

14. Respondent has also voluntarily instituted a number of remedial programs ~~changes in~~ at the plant operations ~~in in the past, including but not limited to: an effort to reduce ground water contamination, including:~~

- A. The underflow solids ponds suspected to be a source of ground water contamination were taken out of service, and underflow solids were excavated and recycled.
- B. The hydroclarifier process unit identified as a significant source of ground water contamination was replaced with a unit which included a secondary liner with a leachate collection system with visual monitoring capability, as well as up and down gradient monitoring wells.
- C. The underflow solids ponds were filled with molten slag and then sealed with a bentonite clay cap and a cover of crushed non-leachable slag.
- D. The northwest pond was excavated and sealed.
- E. All PCB-containing transformers at the Plant were replaced.
- F. Four (4) underground storage tanks containing fuel oil and gasoline were replaced with above-ground tanks complete with concrete sumps and spill containment procedures.

G. A new drinking water well for the plant was installed up gradient from any sources of contamination.

H. In addition to the Golder investigation described above, other monitoring wells were installed and additional groundwater monitoring has been conducted.

~~No determination as to the adequacy or effectiveness of these activities has ever been made by EPA.~~

14. Potential significant pathways for exposure of human beings to the hazardous substances, pollutants and contaminants identified which may be present at the Site include ingestion, and inhalation and ~~dermal contact~~ as a result of drinking, cooking, bathing, and other domestic or agricultural uses of contaminated groundwater. Ingestion, or inhalation of ~~or dermal contact with the~~ hazardous substances, pollutants and contaminants at the Site are alleged to be linked to human health effects if such exposure to these substances is in concentrations and/or durations greater than health-based levels. The work to be conducted pursuant to this Consent Order is to define the concentrations of these substances at or from the Site and determine whether they constitute undue risk to human health or the environment. ~~identified at the Site can cause a wide range of significant human health effects. Specific risks presented by specific hazardous substances found at the Site include the following:~~

~~A. Cadmium is known to cause wide ranging renal and hepatic damage and dysfunction, placental destruction, anosmia, and is a~~

~~suspected carcinogen. Adverse effects to the immune system, cardiovascular system, and testes have also been documented. The toxic nature of cadmium is exacerbated by its long half life, and its high absorbtion in plants, which account for its significant bioaccumulation at the later stages of the human food chain, thereby compounding the threat it poses to human health.~~

~~B. Toxicity resulting from exposure, generally to manganese dioxide, can result in manganism, a psychiatric disorder characterized by irritability, difficulty in walking, speech disturbances, and compulsive behavior. It is caused by lesions and degenerative changes in the basal ganglia. In some cases, a syndrome similar to Parkinson's Disease may develop as a result of damage to the subthalmic nucleus and pallidum. Liver cirrhosis is also frequently observed in addition to the central nervous system changes.~~

~~C. Selenium has produced loss of fertility, congenital defects, and is considered embryotoxic and teratogenic. Chronic exposure has been demonstrated to cause hepatic and spleen damage, anemia, and gastrointestinal disorders. Chronic toxicity has produced hepatic cirrhosis and central nervous system disorders.~~

~~D. Chromium in one of its most common forms (its hexavalent oxidation state, commonly referred to as "Cr VI") has carcinogenic effects, most especially to the lungs, and is known to cause DNA and chromosome damage, as well as skin lesions and ulcerations, and central nervous system and hepatic disorders. Cr VI is highly soluable and very mobile in water. Although~~

~~generally regarded as less harmful, Cr III, the trivalent state of chromium, is a suspected carcinogen, and is more readily absorbed following ingestion in the presence of Cr VI.~~

~~E. Exposure to arsenic, classified as a Group A carcinogen by EPA, increases the incidence of skin, lung, liver and lymphoid cancer. It has been observed to cause chromosomal breakage, cytotoxic and mutagenic effects when tested in vitro. Chronic and subchronic exposures have been shown to cause carcinogenesis, cardiovascular disease, neurological disorders, various dermatoses including hyperpigmentation, disquamation and hair loss, hematopoietic depression, anhydremia, liver damage, sensory disturbances, and distal sensorimotor neuropathy with axonal degeneration.~~

~~F. Workers exposed to vanadium compounds exhibit an increased incidence of bronchopneumonia and bronchitis. Industrial exposures to vanadium pentoxide and other vanadium compounds can cause severe gastrointestinal distress including abdominal pain, nausea and vomiting, cardiac palpitation, tremor, nervous depression, kidney damage, and ophthalmic and dermal irritation. Experimental investigations have suggested the liver, adrenals, and bone marrow may also be adversely affected by subacute exposure. It has been postulated that heart disease can be related to vanadium air pollution, in concert with cadmium.~~

~~G. A form of dermatitis called "nickel itch" is the most frequent effect of exposure to nickel. It has been estimated that as much as five (5) per cent of all eczema is caused by~~

~~nickel or nickel compounds. Chronic low level exposure has been implicated epidemiologically with cancer of the lungs and nose. Nickel Sulfate may induce myocardial and liver damage. Nickel carbonyl is highly toxic.~~

~~H. Ingestion of water containing excess fluorides can lead to mottling of the teeth, most especially in children, skeletal fluorosis, gastrointestinal distress, and disorders of the central nervous system.~~

15. The Site was listed on the National Priorities List ("NPL") on August 30, 1990 (55 Fed. Reg. 35502).

VI. EPA'S CONCLUSIONS OF LAW AND DETERMINATIONS

16. The Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9); the Plant is a facility within the meaning of this Section.

17. ~~Plant~~ **Certain plant** wastes and constituents thereof at the Site, and substances otherwise found at the Site ~~and identified in paragraphs 11 and 12 above, are may be~~ "hazardous substance(s)" as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), or ~~constitute~~ "pollutant(s) or contaminant(s)" which may present an imminent and substantial danger to public health or welfare ~~or the environment~~, as set forth in Section 104(a) (1) of CERCLA.

18. The **presence of** hazardous substances or pollutants or contaminants at the Site, or the past, present or potential migration of hazardous substances or pollutants or contaminants

at or from the Site, constitute actual and/or threatened "release(s)" as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

19. Respondent ~~and Monsanto Chemicals Company~~ are each is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

20. Respondent ~~and Monsanto Chemicals Company~~ are each a ~~responsible party as set forth in~~ is a covered person under Sections 104, 107(a) and 122 of CERCLA, 42 U.S.C. §§ 9604, 9607(a) and 9622.

21. The actions required by this Consent Order are necessary to protect the public health or welfare or the environment, are in the public interest, are ~~not inconsistent~~ consistent with CERCLA or the NCP, and will expedite effective remedial action, if such is required, and minimize the potential for litigation.

VII. NOTICE TO STATE

22. Notice of the issuance of this Consent Order, and that EPA is the lead agency for the coordination, oversight, and enforcement thereof, has been provided to the State of Idaho through its Department of Health and Welfare, Division of Environmental Quality ("IDHW").

VIII. WORK TO BE PERFORMED

23. All work performed pursuant to this Consent Order shall be under the direction and supervision of qualified persons. Within

thirty (30) days after the effective date of this Consent Order, and before any the work outlined below begins at the Site, Respondent shall ~~submit~~ notify EPA in writing of the names, addresses, and qualifications, including experience and professional affiliations, ~~and the proposed scope of work~~ of all key personnel, including contractors, subcontractors, laboratories, and consultants, to be used in performing activities pursuant to this ~~Order to EPA in writing. If despondent Consent Order.~~ If Respondent elects to use any additional contractors, subcontractors, or laboratories subsequent to commencement of activities at the Site, Respondent shall ~~submit~~ notify EPA in writing of such election, including the information listed in this paragraph ~~to EPA in writing~~, at least ten (10) days prior to any such use. EPA may review the notifications for verification that such personnel meet minimum technical background and experience requirements. Any EPA approval shall not be unreasonably withheld. If EPA disapproves with reasons stated in writing within five (5) days of the foregoing notice of any of Respondent's ~~contractors, subcontractors, or laboratories~~ key personnel, Respondent shall ~~make~~ notify EPA of its replacement selection(s) within ~~thirty (30)~~ sixty (60) days of receipt of written disapproval ~~from EPA~~. If EPA subsequently disapproves of the replacement(s), EPA may terminate this Consent Order, conduct a complete RI/FS and/or conduct or authorize any other response activities it deems necessary, and reserves its right to seek costs therefor and penalties from Respondent.

24. Respondent shall conduct activities and submit deliverables ~~for EPA review, comment, approval or modification as EPA may deem appropriate~~, as provided in the attached RI/FS Statement of Work, ("SOW") and the RI/FS Work Plan, which ~~is~~ ~~are~~ incorporated in, and ~~an~~ ~~are~~ enforceable part parts of this Consent Order by this reference. All such work shall be conducted in accordance with the requirements of CERCLA, the NCP, and all applicable EPA regulations. ~~guidance, including, the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA", EPA/540/G-89/004 (October 1988) ("RI/FS Guidance"), guidances referenced therein, and guidances referenced in the SOW, as may be amended or modified by EPA~~ The general activities Respondent shall perform are identified below, ~~including various deliverables to be submitted by Respondent for EPA review and approval.~~ The specific tasks Respondent shall perform are described more fully in the SOW and guidances, and will be set forth in the RI/FS Work Plan. All work performed pursuant to this order Consent Order shall be in accordance with the schedules, standards, specifications, and other requirements of this Consent Order, and the RI/FS Work Plan as initially approved ~~or modified by EPA~~, or as may be amended or modified pursuant to paragraph 34 below. ~~by EPA from time to time.~~ For each and every deliverable, report, memorandum, plan, or other item ~~referenced in any of subparagraphs "A" through "H" of this paragraph, or in any of the numbered sub-subparagraphs thereunder, if~~ which Respondent submits to EPA pursuant to the

SOW or the RI/FS Work Plan EPA will review the submitted deliverable within forty-five (45) days of submission. If EPA disapproves or requires modification or revision of any such deliverable ~~, report, memorandum, plan, or other item~~ based on the attached SOW, in whole or in part, it shall advise Respondent in writing with reasons and recommended alternative approaches or language. Respondent shall then amend and submit a modified or revised version thereof to EPA which is responsive to all EPA EPA's directions, comments, or requirements within ~~ten (10)~~ thirty (30) days after receiving such written directions, comments or requirements from EPA, unless a shorter or longer time is specified by EPA. EPA will review any modified or revised versions of deliverables within fourteen (14) days of the resubmission.

~~A. Task I: Scoping. EPA will determine the specific objectives of the RI/FS and the general management approach for the Site, as stated in the SOW. Respondent shall conduct the remainder of scoping activities as described in the SOW and referenced guidances. At the conclusion of the project planning phase, Respondent shall submit the following deliverables to EPA:~~

- ~~1. RI/FS Work Plan. Within thirty (30) days after the effective date of this Order, Respondent shall submit a complete RI/FS Work Plan to EPA.~~
- ~~2. Sampling and Analysis Plan ("SAP"). Within thirty (30) days after the effective date of this Order,~~

~~Respondent shall submit a SAP to EPA which shall consist of a Field Sampling Plan ("FSP") and a Quality Assurance Project Plan ("QAPP"), as described in the SOW and guidances.~~

~~3. Health and Safety Plan ("HSP"). Within thirty (30) days after the effective date of this Order, Respondent shall submit an HSP for the Site.~~

~~Following EPA approval, or modification or revision as required by EPA, the RI/FS Work Plan and the SAP shall be incorporated in, and be an enforceable part of this Order.~~

~~B. Task II: Community Relations Plan. EPA will prepare a Community Relations Plan in accordance with EPA guidance regulations and the requirements of CERCLA and the NCP. As requested by EPA, Respondent shall provide information supporting EPA's community relations programs related to the Site, and shall participate in public meetings which may be held or sponsored by EPA to explain activities at or concerning the Site.~~

~~C. Task III: Site Characterization. Following EPA approval or modification of the RI/FS Work Plan and SAP, Respondent shall implement these plans to characterize the Site. Respondent shall complete this characterization of the Site within nine (9) months after Respondent receives EPA approval of the RI/FS Work Plan and SAP. Respondent shall provide EPA with analytical data in a form showing the sampling location, medium and results, within seven (7) days~~

~~after the results of each sampling activity are available to Respondent or any of its employees, agents, contractors or consultants. Respondent shall notify EPA in writing within seven (7) days after completion of field activities. During Site characterization, Respondent shall submit the following deliverables to EPA, as described in the SOW and RI/FS Work Plan:—~~

- ~~1. Technical Memorandum on Modeling of Site Characteristics. If EPA or Respondent proposes that modeling is appropriate, within twenty (20) days after such proposal, Respondent shall submit a Technical Memorandum on Modeling of Site Characteristics, as described in the SOW.~~
- ~~2. Preliminary Site Characterization Summary. Within twenty (20) days after completion of the field sampling and analysis, as specified in the RI/FS Work Plan, Respondent shall submit a Site Characterization Summary to EPA.~~

~~D. Task IV: Risk Assessment. Actual and potential risks to human health and the environment shall be identified and characterized by EPA in a Risk Assessment Report and an Environmental Evaluation Report, both of which shall be incorporated into the RI Report. As requested by EPA, Respondent shall provide information for EPA's risk assessment and environmental evaluation.—~~

~~E. Draft Remedial Investigation Report. Within thirty (30) days after receipt by Respondent of EPA's Risk Assessment and Environmental Evaluation Reports, or upon completion of Site Characterization, whichever is later, Respondent shall submit a draft Remedial Investigation Report in accordance with the SOW, the RI/FS Work Plan and SAP.~~

~~F. Task V: Treatability Studies. Respondent shall conduct treatability studies, except where Respondent can demonstrate in writing to EPA satisfaction that they are not needed. Major components of the treatability studies include: determinations of need for studies, the scope, design, and completion of studies, as described in the SOW. While performing treatability studies, Respondent shall submit the following deliverables to EPA:~~

~~1. Identification of Candidate Technologies~~

~~Memorandum. An Identification of Candidate Technologies Memorandum shall be submitted within thirty (30) days after EPA approval of the RI/FS Work Plan.~~

~~2. Treatability Testing Statement of Work. Respondent shall submit a Treatability Testing Statement of Work within twenty (20) days after EPA notifies Respondent in writing that treatability testing shall be required, unless a shorter or longer time is specified by EPA.~~

~~3. Treatability Testing Work Plan. Within twenty (20) days after EPA approval of the Treatability Testing Statement of Work, Respondent shall submit a Treat-~~

~~ability Testing Work Plan, including a schedule for specified tasks.~~

~~4. Treatability Study Sampling and Analysis Plan.~~

~~Within twenty (20) days after Respondent's receipt of a written determination by EPA, or upon a determination by Respondent, that there is a need for a separate or revised QAPP or FSP, Respondent shall submit a Treatability Study Sampling and Analysis Plan to EPA.~~

~~5. Treatability Study Health and Safety Plan.~~

~~Simultaneously with the Treatability Study Sampling and Analysis Plan, if required, Respondent shall submit a Treatability Study Health and Safety Plan for the Site to EPA.~~

~~6. Treatability Study Evaluation Report. Within twenty (20) days after the completion of any treatability testing Respondent shall submit a Treatability Study Evaluation Report as described in the SOW and RI/FS Work Plan.~~

~~G. Task VI: Development and Screening of Alternatives.~~

~~Respondent shall develop an appropriate range of management options for the remediation of the hazardous substances, pollutants and contaminants at the Site which will be evaluated through the development and screening of alternatives, as provided in the SOW and RI/FS Work Plan. During the development and screening of alternatives, Respondent shall submit the following deliverables to EPA:~~

~~1. Memorandum on Remedial Action Objectives. Within twenty (20) days after Respondent's receipt of EPA's Risk Assessment and Environmental Evaluation Reports, or upon completion of Site characterization, whichever is later, despondent shall submit a Memorandum on Remedial Action Objectives.~~

~~2. Memorandum on Development and Preliminary Screening of Alternatives, Assembled alternatives Screening Results and Final Screening. Within twenty (20) days after submittal of the Memorandum on Remedial Action Objectives, Respondent shall submit a memorandum summarizing the development and screening of remedial alternatives, including an alternatives array document as described in the SOW.~~

~~H. Task VII: Detailed Analysis of Alternatives. Respondent shall conduct a detailed analysis of remedial alternatives, as described in the SOW and the RI/FS Work Plan. During the detailed analysis of alternatives, Respondent shall submit the following deliverables to EPA:~~

~~1. Report on Comparative Analysis and Presentation to EPA. Within thirty (30) days after EPA approval of a memorandum on the development and screening of remedial alternatives, Respondent shall submit a Report on Comparative Analysis to EPA summarizing the results of the comparative analysis performed between the remedial alternatives. Within twenty (20) days after submitting~~

~~the original Report on Comparative Analysis, Respondent shall make a presentation to EPA during which Respondent shall summarize the findings of the remedial investigation in relation to remedial action objectives and present the results of the nine criteria evaluation and comparative analyses, as described in the SOW.~~

~~2. Draft Feasibility Study Report. Within thirty (30) days after the presentation to EPA described in the preceding subparagraph, Respondent shall submit a draft Feasibility Study Report. Respondent shall refer to Table 6-5 of the RI/FS Guidance for the content and format of this report. The report as amended, and the administrative record, shall provide the basis for the EPA Proposed Plan pursuant to Sections 113(k) and 117(a) of CERCLA, 42 U.S.C. §§ 113(k), 117(a), and shall document the development and analysis of remedial alternatives.~~

~~25. EPA shall be the final arbiter in any dispute regarding the sufficiency or acceptability of all submittals, and of all activities performed pursuant to this Order, in accordance with the procedures for dispute resolution set forth in Section XVII of this Order.~~

26. Respondent shall not proceed further with subsequent field or pilot-scale treatability activities or tasks required pursuant to this Consent Order until Respondent has received EPA approval for the RI/FS Work Plan. and SAP. ~~If treatability testing or~~

~~studies are required, Respondent shall not proceed further with subsequent treatability testing or study activities or tasks until Respondent has received EPA approval for the Treatability Testing Work Plan, and Sampling and Analysis Plan.~~ Respondent shall proceed with all other tasks and activities which may be conducted independently of these deliverables in accordance with the schedule set forth in this ~~Order~~ Consent Order and the SOW RI/FS Work Plan.

~~27. EPA may stop Respondent from proceeding at any time, either temporarily or permanently, on any task(s), activity(s) or deliverable(s) at or relating to the Site and/or the implementation of this Order.~~

28. If Respondent modifies or revises any deliverable, ~~report, plan, or other submittal~~ after receipt of EPA comments, directions, or requirements, and EPA ~~subsequently disapproves the revised submittal, or if~~ the subsequent submittals do not, in EPA's judgment, adequately address EPA's comments, directions or requirements for changes, EPA may seek stipulated ~~or statutory~~ penalties; perform its own studies; complete the RI/FS (or any portion of the RI/FS); and/or take any response action at the Site it deems necessary, in accordance with its authority, and seek reimbursement from Respondent for its costs therefor; and/or seek any other appropriate relief. Respondent reserves all its rights to defend against any such claims or actions and its rights to assert any claims against any persons or entity under any applicable law.

~~29. If EPA prohibits Respondent from performing some tasks, and/or takes over or causes others to perform some tasks, but does not remove Respondent's duty to prepare the RI/FS pursuant to this Order, Respondent shall incorporate and integrate information supplied by EPA into the final RI/FS report as directed by EPA.~~

~~30. The absence of express EPA comment, approval or disapproval of any submission within any specified time period shall not be construed as approval by EPA. Except as set forth in paragraphs 26 and 27 above, Respondent is responsible for the timely preparation of deliverables acceptable to EPA.~~

~~31. Respondent shall, prior to the shipment of hazardous substances from the Site to an out of state waste management facility, submit written notification, as set forth below, to the appropriate state environmental official in the receiving state, and to the EPA Project Coordinator. This notification requirement shall not apply when the total volume of such a shipment will not exceed ten (10) cubic yards. Notification shall include: 1) the name and location of the receiving facility; (2) the type and quantity of hazardous substances to be shipped; (3) the expected shipment schedule; and (4) the mode of transportation. Respondent shall submit written notification of any changes in the shipment plan as set forth in the notification. Notification of the selection of the receiving facility and state shall be made at least thirty (30) days before any hazardous substances are actually shipped.~~

IX. MODIFICATION OF THE WORK PLAN

32. If at any time, Respondent identifies a need for additional data in order to complete work pursuant to this Consent Order, Respondent shall submit a memorandum to the EPA Project Coordinator ~~within twenty (20) days after such need has been identified~~ explaining the need for, and the nature of the data sought, and the extension of time therefor. EPA will determine within fourteen (14) days whether it will agree to the extension of time. ~~whether the additional data shall be incorporated into any deliverable(s).~~

33. ~~In addition to the requirements of Section 103 of CERCLA, 42 U.S.C. § 9603, and all other statutory or regulatory reporting requirements,~~ Respondent shall immediately orally notify EPA and IDHW of any conditions at the Site which may pose an immediate imminent and substantial endangerment to the public ~~threat to~~ human health or welfare or the environment because of an actual or threatened release of a hazardous substance from the Site. Respondent ~~shall also orally notify the EPA Project Coordinator within three (3) days of discovery of any unanticipated or changed circumstances at the Site.~~ If, for any reason, the EPA Project Coordinator cannot be reached, Respondent shall as ~~immediately soon as possible~~ thereafter notify the EPA Region 10 Hazardous Waste Division Director, or leave detailed messages with both of their respective offices if neither can be reached. ~~EPA may modify any work to be performed pursuant to this Order or~~

~~require additional work in response to any change in circumstances. Respondent shall perform such modified or additional work~~ In the event that the unanticipated or changed circumstances require modification in the RI/FS Work Plan to complete the RI/FS, EPA may in writing request such modification to the RI/FS Work Plan pursuant to Paragraph 34 below. Such modifications shall not relate to the performance of Site cleanup activities or the design work thereof.

34. EPA may determine at any time that additional work may be necessary to accomplish the objectives of the RI/FS as set forth in the SOW. EPA may ~~require request in writing that Respondent~~ ~~to perform such additional work or other response activity in~~ addition to the work initially approved or modified. Respondent shall confirm its willingness to perform any such additional work in writing within seven (7) days after receipt of the EPA request therefor, or properly invoke the dispute resolution procedures set forth in Section XVII of this Consent Order. Subject to the resolution of any dispute, Respondent shall implement the additional tasks EPA determines are necessary to complete the RI/FS. The additional work shall be completed according to the written standards, specifications, and schedule proposed by Respondent and agreed to by Respondent and ~~set forth or approved by EPA.~~ EPA may conduct all or part of such work itself, and may seek reimbursement of costs from Respondent, and/or any other appropriate relief, except that Respondent shall not be subject to stipulated penalties under this Consent Order for failure to

perform tasks not included in the attached SOW or the RI/FS Work Plan.

X. QUALITY ASSURANCE

35. Respondent shall assure that all work performed, samples taken and analyses conducted, conform to the requirements of the RI/FS Work Plan. ~~SOW the QAPP, and guidances identified therein, and that all field personnel shall be properly trained for each task they may perform, including strict adherence to EPA chain of custody procedures.~~

XI. FINAL RI/FS, PROPOSED PLAN, PUBLIC COMMENT, RECORD OF DECISION, ADMINISTRATIVE RECORD.

36. EPA retains full authority and responsibility for all aspects of public participation including the release to the public of the RI/FS Report, the preparation and release to the public of the Proposed Plan and the ROD, as set forth in CERCLA and the NCP.

37. EPA shall provide Respondent with the Final RI/FS Report, the Proposed Plan, and the ROD.

38. ~~EPA will determine the contents of the administrative record file for the selection of remedial action. Respondent shall submit documents developed during the course of the RI/FS to EPA upon which response selection may be based. Upon request by EPA, Respondent shall submit copies of plans, task memoranda, including all documentation of field modifications,~~

~~recommendations for further action, quality assurance memoranda and audits, raw data, field notes, laboratory analytical reports, and other reports to EPA.~~ Respondent shall also submit any previous studies in its possession conducted under state, local or other federal authorities relating to response selection, and all communications between Respondent and state, local or other federal authorities concerning response selection. EPA shall establish a community information repository at or near the Site to house a copy of the administrative record.

XII. PROGRESS REPORTS AND MEETINGS

39. Respondent and EPA shall meet at mutually acceptable times after the submission of each deliverable and at such other times as reasonably requested by either Respondent or EPA. Respondent ~~shall make presentations at, and participate in, meetings and telephone conferences at the request of EPA during the initiation, conduct, and completion of the RI/FS. In addition to discussion of the technical aspects of the RI/FS, topics will include anticipated problems or new issues. Meetings and telephone conferences will be scheduled by EPA.~~

40. In addition to the deliverables set forth in this Consent Order, until the termination of this Consent Order or otherwise agreed between the parties, Respondent shall provide submit monthly progress reports to EPA by the 10th day of each month following the effective date of this Consent Order, which: (1) describe the actions which have been taken to comply with this

Consent Order during the previous month; (2) include all validated results of sampling and tests and all other data received by the Respondent which has not been previously given to EPA; (3) describe all work planned for the next two (2) months with schedules relating such work to the overall project schedule, including percentage of completion data; and (4) describe all problems encountered and any or anticipated problems, any actual or anticipated delays, and all solutions developed and implemented or planned to address any actual or anticipated problems or delays.

XIII. SAMPLING, ACCESS, AND DATA AVAILABILITY/ADMISSIBILITY

41. Within ~~seven (7)~~ fourteen (14) days after ~~Respondent's~~ Respondent's receipt of a written request by EPA, Respondent shall ~~submit all results of sampling, tests, modeling or other data that are within the scope of the RI/FS and which are~~ provide EPA with all raw data and all accompanying laboratory analytical reports generated by Respondent, or on Respondent's behalf, ~~including all raw data and all laboratory analytical reports generated by Respondent, or on Respondent's behalf,~~ during implementation of this Order. All other information or records created, maintained or received by Respondent or its agents, employees, accountants, contractors or consultants which is in any way related to the through the date of the request pursuant to implementation of this Consent Order. EPA will make available to Respondent raw data and all validation reports

generated by EPA pursuant to EPA's oversight of this Consent Order. All other documents created, maintained or received by EPA or Respondent and their agents or employees which relate to work undertaken in the implementation of this Consent Order, including contractual documents, invoices, receipts, work orders, disposal records, and any other ~~records or work-related~~ documents not ~~previously otherwise~~ required herein shall promptly be made available ~~to EPA~~ on written request as soon as practicable, but in any event within ~~thirty (30)~~ sixty (60) days of Respondent's receipt of EPA's the written request. EPA or Respondent shall be permitted to copy all such documents. Respondent's The obligation to ~~produce~~ make available documents under this paragraph shall exclude those ~~portions of documents~~ documents which are ~~privileged~~ protected from discovery as attorney-client privileged communications, or as attorney work product as defined in Federal Rule of Civil Procedure 26. For any document or portion thereof sought to be withheld hereunder, Respondent the party seeking protection shall identify in writing the subject, author, addressee, and date, as well as any other information necessary to determine the basis of ~~Respondent's~~ the claim of privilege or of attorney work product.

42. Respondent shall notify EPA at least seven (7) days prior to conducting any field sampling events described in the SOW, RI/FS Work Plan, or SAP. Upon request by EPA, or its authorized representative, Respondent shall allow split or duplicate samples to be taken by EPA or its authorized representatives of any

material sampled in connection with the implementation of this Consent Order. All of Respondent's split samples shall be analyzed by the methods identified in the QAPP. EPA will make available to Respondent the results of such split or duplicate sampling and analysis. Upon request by Respondent, EPA will allow split or duplicate samples to be taken by Respondent of any material sampled by EPA or its authorized representative.

43. EPA and its designated representatives shall be permitted to observe any field work carried out pursuant to this Consent Order. ~~despndent~~Respondent shall permit such designated representatives full access to, and freedom of movement at the Site ~~and any other premises~~ where work under this Consent Order is to be performed, at all reasonable times ~~7~~ including, but not limited to, any time that work under this Consent Order is being performed, for purposes of inspecting or observing ~~despndent's~~ Respondent's progress in implementing the requirements of this Consent Order, verifying information submitted to EPA by Respondent, ~~conducting investigations relating to contamination at the Site,~~ or for any purpose EPA determines to be within its EPA's statutory and/or regulatory function, including video or audio recording of any activities at the Site. Nothing herein shall be interpreted as limiting or affecting EPA's right of entry or inspection authority under federal law. All persons with access to the Site ~~under this paragraph~~ shall comply with ~~all approved~~ health and safety plans.

44. Respondent may assert a claim of business confidentiality for part or all of the information submitted to or collected by EPA pursuant to this Consent Order in accordance with Section 104(e) (7) of CERCLA, 42 U.S.C. § 9604(e) (7), and 40 C.F.R. Part 2, Subpart B. This claim shall be asserted in the manner described by 40 C.F.R. 2.203(b). ~~and substantiated when made.~~ If no such claim accompanies the information when it is submitted to or collected by EPA, it may be made available to the public by EPA or IDHW without further notice to Respondent unless Respondent subsequently asserts a claim prior to public disclosure. Respondent shall not assert any confidentiality claim with respect to any data related to physical Site conditions, sampling, or monitoring.

~~45. Respondent shall not object to any use of any data gathered, generated, or evaluated by EPA, IDHW, or Respondent in the performance or oversight of any work which has been verified according to the quality assurance/quality control (QA/QC) procedures required by this Order or any EPA approved work plan or SAP. If Respondent objects to any use of any other data relating to the RI/FS, Respondent shall submit a report to EPA which identifies and explains Respondent's objections, describes any proposed acceptable uses of the data, and specifically identifies any proposed limitations on the use of the data. This report must be submitted to EPA within fifteen (15) days after the monthly progress report containing the data.~~

46. Respondent shall ~~timely obtain, in the form of a written access agreement(s), access obtain, or use all reasonable efforts to obtain, access agreements~~ to any portion of the Site, and to any off-Site premises where work under this Consent Order is to be performed, which are owned by anyone other than Respondent, ~~or any unit, division or subsidiary thereof.~~ This Consent Order does not convey any rights of access to Respondent. Such agreement(s) shall provide reasonable access for EPA, its contractors and oversight officials, IDHW and its contractors, and Respondent and its authorized representatives, and shall specify that Respondent is not EPA's representative with respect to any liability associated with activities required by this Consent Order. ~~Copies Confirmation of all such agreements shall be provided to EPA prior to the initiation of any field activities. Respondent shall, if necessary, provide reasonable compensation to any property owner for access.~~ If Respondent is unable to obtain access to any premises necessary for any task or work required by this Order, ~~under circumstances which constitute "force majeure" as defined in Section XIX of this Consent Order,~~ EPA may obtain access for Respondent, or perform tasks or activities under its own authority, or terminate this Consent Order. If EPA performs any tasks or activities and does not terminate this Consent Order, Respondent shall: perform all required work Respondent has the necessary access to perform, ~~reimburse EPA for all costs EPA incurs in performing any tasks or activities,~~ and integrate the results of any tasks or activities

undertaken by EPA into Respondent's deliverables, ~~indemnify the United States for any liability arising out of the performance of any such tasks or activities by EPA to the extent set forth in paragraph 90 of this Order.~~ Respondent shall reimburse EPA for all costs and attorney fees incurred by the United States to obtain access. Respondent's inability to obtain access shall not constitute a violation of this Consent Order.

XIV. DESIGNATED PROJECT COORDINATORS

47. All notices and documents including reports, approvals, disapprovals, and other correspondence which must be submitted under this Consent Order, shall be sent by certified mail, return receipt requested, express delivery or telecopy transmission, to the following addressees or to any other addressees which Respondent and EPA designate in writing:

- A. Four (4) copies of documents to be submitted to EPA shall be forwarded to:

John Meyer, M/S HW-113,
U.S. EPA, Region 10
1200 Sixth Avenue
Seattle, WA 98101

- ~~B. One (1) copy of documents to be submitted to IDHW shall be forwarded to:~~

C. Documents to be sent to Respondent shall be forwarded to:

Robert L. Geddes
Monsanto Soda Springs Plant
Highway 34 North
Soda Springs, Idaho 83276

48. ~~On or before~~ Within seven (7) days of the effective date of this Consent Order, EPA and Respondent shall each designate their own Project Coordinator. Each Project Coordinator shall be responsible for overseeing the implementation of this Consent Order. To the extent possible, communications between Respondent and EPA shall be directed ~~to~~ through the Project Coordinators by mail, with copies to such other persons as ~~EPA may designate.~~ are designated. The Project Coordinators may by written agreement change the schedules for work to be performed.

49. Respondent's Project Coordinator shall be a qualified individual with experience in hazardous waste investigation and handling, and shall have the technical expertise and skills necessary to direct and supervise the activities required under this Consent Order. ~~Order. Twenty (20) days prior to commencement of any activities at the Site, Respondent shall submit the name, title, qualifications, experience, professional affiliations, and background, of the individual selected as Respondent's Project Coordinator to EPA in writing.~~

50. ~~EPA may disapprove Respondent's designated Project Coordinator which shall require Respondent to make another selection within ten (10) days of receive of any such disapproval~~

~~by EPA. EPA and Respondent may elect to change its their respective Project Coordinator Coordinators by submitting written notification to EPA at least ten (10) days before the effective date of such change, including all of the information required by paragraph 49 above for the designation of a Project Coordinator.~~

50. EPA may disapprove Respondent's designated Project Coordinator which shall require Respondent to make another selection within ten (10) days of receipt of any such disapproval by EPA. ~~EPA may change its Project Coordinator by sending a written notification of such change to Respondent the other at least ten (10) days before the effective date of such change.~~

50. EPA's Project Coordinator shall have the authority lawfully vested in a Remedial Project Manager (RPM) and On-Scene Coordinator (OSC) by the NCP, and shall have the authority, in accordance with the requirements of the NCP, to halt any work required by this Consent Order and to take any necessary response action when he or she determines conditions at the Site may present an imminent and substantial endangerment to the public health or welfare or the environment. The absence of the EPA Project Coordinator from the area under study pursuant to this Consent Order shall not of itself be cause for any stoppage or delay of any work.

51. EPA shall arrange for a qualified person with experience in hazardous waste investigation and handling to assist in its oversight and review of the conduct of the RI/FS, as required by

Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). The oversight assistant may observe work and make inquiries in the absence of EPA, but is not authorized to modify any requirement of this Consent Order or any requirement developed pursuant to this Consent Order in any work plan or other document.

XV. OTHER APPLICABLE LAWS

52. All actions required to be taken pursuant to this Consent Order shall be performed in accordance with the requirements of all applicable local, state, and federal laws and regulations. No local, state, or federal permit shall be required for any portion of any activity pursuant to this Consent Order conducted entirely ~~on-site~~ on-site, as provided by the NCP. Off-Site disposal of hazardous substances shall comply with all applicable provisions of CERCLA, the Resource Conservation and Recovery Act, ("RCRA") 42 U.S.C. §§ 6901-6992, the implementing regulations respectively thereunder, ~~and EPA guidances and policies.~~

XVI. RECORD PRESERVATION

53. Notwithstanding any record retention policy to the contrary, ~~all~~ significant records and documents created by EPA or Respondent, or on EPA's or Respondent's behalf, which relate in any way to the implementation of this Consent Order, including all records referenced in paragraph 41 of this Consent Order shall be preserved ~~by Respondent for a minimum of six (6) years after commencement of construction of any remedial action at the~~

~~Site. After this six (6) year period, for a minimum of three (3)~~
 years after issuance of the final FS Report. After this three
 (3) year period, EPA or Respondent shall notify EPA the other at
 least ninety (90) days before any such records are scheduled to
 be destroyed. If EPA requests that ~~the documents~~ Respondent's
 documents be saved, Respondent shall, at no cost to EPA, give the
 documents or true and accurate copies of the documents, to EPA.
 If Respondent requests copies of EPA's records, EPA shall make
 them available to Respondent for copying, or provide copies at
 Respondent's costs.

XVII. DISPUTE RESOLUTION

54. If a dispute arises concerning any deliverable(s),
 document(s), work plan(s), or activity(s) or work to be performed
 by Respondent pursuant to this Consent Order, Respondent shall
 notify EPA of the existence of the dispute as promptly as
 possible but in no event later than ~~ten (10)~~ thirty (30) days
 after receipt of EPA disapproval or comment, or after Respondent
 has become aware, or should reasonably have become aware, of the
 dispute. Respondent's written notification shall set forth
 Respondent's position in the dispute, and state all bases
 therefor. ~~If Respondent so notifies EPA, EPA and Respondent have~~
~~an additional ten (10) days from EPA's notification to resolve~~
~~the dispute~~ Within 14 days of receipt of Respondent's written
 notification, EPA shall provide the Respondent with a written
 response which identifies potential areas of agreement and

disagreement with reasons. EPA and Respondent shall then have an additional ten (10) days from Respondent's receipt of EPA's response to reach agreement. If agreement is reached, the resolution shall be reduced to writing, signed by the parties and, if necessary, incorporated into this Consent Order. If agreement is not reached within this ~~ten (10) day period~~, EPA ~~shall provide twenty-four (24) day period~~, Respondent may request a meeting with the EPA Region X Regional Administrator to present Respondent's position. The Regional Administrator shall resolve the dispute by providing a written statement of ~~its~~ his or her decision to Respondent along with the specific basis and reasons for the decision. The Regional Administrator's resolution is EPA's final decision. Respondent shall proceed in accordance with EPA's final decision regarding the matter in dispute, regardless of whether Respondent agrees with the decision. If Respondent ~~fails~~ or refuses to fully implement EPA's decision, EPA may take any action it deems necessary, which is not inconsistent with this Order or ~~its~~ authority including implementation of its decision ~~with~~ and seeking recovery of its costs therefor from Respondent, enforcement of the decision, collection of stipulated penalties, and/or any other appropriate relief. Respondent reserves all its rights to defend against any claims or actions and its rights to assert any claims against any person or entity under any applicable law.

55. Respondent is not relieved of its obligations to perform and conduct activities and submit deliverables in accordance with

any schedules incorporated into or developed pursuant to this Consent Order, while a matter is pending in dispute resolution, ~~excepting only the specific matter subject to the dispute.~~ The invocation of dispute resolution ~~does not stay~~ stays the payment of stipulated penalties under this Consent Order.

XVIII. STIPULATED PENALTIES

56. ~~Respondent shall be liable for stipulated penalties, in accordance with this Section, for~~ For each day that Respondent fails to ~~complete a designated deliverable in a timely manners~~ fails to produce a designated deliverable of acceptable quality to EPA, or otherwise fails to perform in accordance comply with the requirements of this Order. Penalties shall paragraphs 59, 60 and 61 below, EPA may assess stipulated penalties as set forth below. For purposes of this Consent Order, "fails to comply" means failure to submit an original or revised deliverable in a timely fashion, failure to revise a deliverable to conform with EPA's comments, and submittal of an original deliverable of such poor quality as not to constitute a bona fide submission. Penalties for failure to submit a deliverable begin to accrue on the day after performance is due. EPA will provide written notice for ~~violations~~ stipulated penalties that are not based on timeliness. ~~Penalties shall continue to accrue through any period of required revision for any deliverable~~ Such stipulated penalties begin to accrue on the day after Respondent received written notice from the EPA. Stipulated penalties shall continue

until the noncompliance is corrected or the thirtieth (30th) day of stipulated penalties, whichever is earlier. Stipulated penalties may be waived based upon Respondent's good faith attempt to comply with this Consent Order.

57. Payment shall be due within ~~thirty (30)~~ sixty (60) days after receipt of a demand letter from EPA. Respondents shall pay interest on any unpaid balance at the end of this ~~thirty (30)~~ sixty (60) day period, at the rate established by the Department of Treasury pursuant to 30 U.S.C. § 3717. Respondent shall further pay a handling charge of one (1) percent, to be assessed at the end of each thirty (30) day period, and a six (6) percent per annum penalty charge to be assessed if any penalty is not paid in full within ninety (90) days after it is due.

58. Respondent shall make all payments by forwarding a check to:

U.S. Environmental Protection Agency
Region 10 Superfund Accounting
P.O. Box 371003M
Pittsburgh, Pennsylvania 15251

Checks should state the name of the Site, the Site identification number, the account number, and the title and docket number of this Consent Order. A copy of the check and accompanying transmittal letter shall be forwarded to the EPA Project Coordinator.

59. For the following major deliverables, stipulated penalties shall accrue in the amount of ~~\$1,000~~ \$500 per day, per violation,

for the first seven (7) days of noncompliance; ~~\$2,500~~ \$1,000 per day, per violation, for the eighth (8th) through fourteenth (14th) day of noncompliance; ~~\$5,000~~ and \$1,500 per day, per violation, for the fifteenth (15th) day through the thirtieth (30th) day; and ~~\$10,000 per day, per violation, for the thirtieth (30th) day through the ninetieth (90th) day.~~

A. An original and any revised set of Phase II Remedial Investigation/Feasibility Study Project Plans. RI/FS Work Plan.

~~B. An original and any revised Sampling and Analysis Plan.~~

C. An original and any revised Draft Remedial Investigation Report.

~~D. An original and any revised Treatability Testing Work Plan.~~

~~E. An original and any revised Treatability Study Sampling and Analysis Plan.~~

F. An original and any revised Draft Feasibility Study Report.

60. For the following interim deliverables, stipulated penalties shall accrue in the amount of ~~\$500~~ \$250 per day, per violation, for the first seven (7) days of noncompliance; ~~\$1,000~~ \$500 per day, per violation, for the eighth (8th) through fourteenth (14th) day of noncompliance; ~~\$2,500~~ and \$1,000 per day, per violation, for the fifteenth (15th) day through the thirtieth (30th) day; and ~~\$5,000 per day, per violation, for the thirtieth (30th) day through the ninetieth (90th) day.~~

~~A. Technical Memorandum on Modeling of Site characteristics.~~

A.B. Preliminary Site Characterization Summary Report.

~~C. Identification of Candidate Technologies Memorandum.~~

~~D. Treatability Testing Statement of Work.~~

~~E. Treatability Study Evaluation Report.~~

~~F. Memorandum on Remedial Action Objectives~~

B.G. Memoranda on Remedial Alternatives Development and Preliminary Screening Memorandum of Alternatives, Assembled Alternatives Screening Results, and Final Screening.

C. Preliminary Draft Remedial Investigation Report.

D.H. Comparative Analysis Report.

61. For the monthly progress reports, and for any failure to perform in accordance with the requirements of this Consent Order, stipulated penalties shall accrue in the amount of \$250 \$100 per day, per violation, for the first seven (7) days of noncompliance; ~~\$500~~ \$250 per day, per violation, for the eighth (8th) through fourteenth (14th) day of noncompliance; ~~\$2,000~~ \$500 per day, per violation, for the fifteenth (15th) day through the thirtieth (30th) day, ~~and \$5,000 per day, per violation, for the thirtieth (30th) day through the ninetieth (90th) day.~~

62. Respondent may dispute EPA's right to assess penalties by invoking dispute resolution. Penalties shall accrue but need not be paid during a properly invoked dispute resolution, except penalty accrual shall be suspended if consideration by the Regional Administrator period pursuant to paragraph 54 extends

beyond twenty (20) days. If Respondent does not prevail in whole or in part upon resolution, all applicable penalties shall be due within ~~thirty (30)~~ sixty (60) days after resolution of any such dispute.

63. If EPA decides corrections to any deliverable shall be reflected in any subsequent deliverable ~~and does not require resubmission of the initial deliverable~~, stipulated penalties for the initial deliverable shall cease to accrue on the day of such decision by EPA. In the event that Respondent corrects a deficiency so that the total RI/FS schedule is not delayed and the final deliverable is submitted on time, then any stipulated penalties for the corrected deliverable may be forgiven. A single act or omission may not be the basis for more than one stipulated penalty, and subsequently scheduled dates shall be adjusted such that repeated violations are not based upon a prior single act or omission. Payment of stipulated penalties does not alter Respondent's obligation to complete performance under this Consent Order.

64. The stipulated penalties provisions of this Consent Order do not preclude EPA from pursuing any other remedies or sanctions, including any applicable statutory penalties. Payment of stipulated penalties does not alter Respondent's obligation to complete performance under this Consent Order.

XIX. FORCE MAJEURE

65. "Force majeure," for purposes of this Consent Order, is defined as ~~any~~ an event arising from causes ~~entirely~~ beyond the control of Respondent or any entity controlled by Respondent, including Respondent's agents, consultants ~~7~~ and contractors and subcontractors, which delays the timely performance of any obligation under this ~~Order notwithstanding Respondent's best efforts to avoid such delay. The requirement that Respondent use "best efforts" shall include using best efforts to anticipate potential force majeure events and using best efforts to address the effects of any such events as they may occur, and thereafter, such that the delay is minimized to the greatest extent~~ practicable Consent Order despite Respondent's efforts to avoid delay. Respondent will diligently avoid or minimize delay. Examples of events that are not force majeure events include increased costs or expenses of any work to be performed under this Consent Order, or any financial inability or difficulty to perform any such work.

66. If any event occurs or has occurred which may delay the performance of any obligation under this Consent Order, regardless of whether caused by a force majeure event, Respondent shall verbally notify the EPA Project Coordinator, as set forth in paragraph 33 above, as soon as possible, and not later than ~~forty-eight (48) hours~~ three business days after Respondent knew ~~or should have known that any~~ learns that the event might cause a delay. Within ~~seven (7)~~ ten (10) days thereafter, Respondent shall provide a written memorandum ~~explaining the reasons for~~

explanation of the delay including; its anticipated duration; all actions taken or to be taken to prevent or minimize the delay; a schedule for the implementation of any measures to be taken to mitigate its effects; ~~a statement as to whether Respondent believes the event may cause or contribute to an endangerment to public health, welfare or the environment;~~ and, if applicable, why Respondent believes the event constitutes a force majeure. The memorandum shall be accompanied by all available pertinent documentation including any relevant third party correspondence. Respondent ~~shall exercise best efforts to~~ will diligently seek to avoid or minimize any delay and any effects of any delay. Failure to comply with the above requirements shall ~~preclude Respondent from asserting~~ constitute a waiver of Respondent's right to assert any claim of force majeure for such delaying event.

67. If EPA agrees that the delay or anticipated delay is attributable to force majeure, the time for performance of the obligations under this Consent Order that are directly affected by the force majeure event shall be extended by EPA for a period ~~not to exceed at least equal to~~ the actual duration of the delay attributed to the force majeure event. An extension of the time for performance of the ~~obligation directly~~ obligations affected by the force majeure event shall not extend the time for performance of any other obligations.

68. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, or does not

agree with Respondent as to the appropriate length of any extension due to force majeure, Respondent may invoke the dispute resolution procedures set forth in Section XVII of this Consent Order.

69. In dispute resolution, Respondent shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay was or will be warranted under the circumstances, that Respondent did exercise or is exercising due diligence ~~by using its best efforts~~ to avoid and mitigate the effects of the delay, and that Respondent has complied with all of the requirements of paragraph 66 above.

XX. REIMBURSEMENT OF PAST COSTS

70. Within ~~fifteen (15)~~ **sixty (60)** days of the effective date of this Consent Order, Respondent shall remit a certified or cashier's check to EPA in the amount of ~~\$60,049.20~~, \$_____, for all **documented and substantiated** response costs, plus interest, incurred by the United States in its investigation of the Site up to and including September 8, 1990.

71. Checks should be made payable to the Hazardous Substances Superfund and should state the name of the Site, Site identification number, the Regional Lock Box Number account number as set forth below, and the title and docket number of this Consent Order. Checks should be forwarded to:

U.S. Environmental Protection Agency

Superfund Accounting
P.O. Box 371003M
Pittsburgh, Pennsylvania 15251

72. A copy of the check and any transmittal correspondence should be sent simultaneously to the EPA Project Coordinator.

XXI. REIMBURSEMENT OF RESPONSE AND OVERSIGHT COSTS

73. Following the issuance of this Consent Order, EPA shall submit an accounting of all response costs, including oversight costs, incurred by the United States with respect to the Site, to Respondent on a periodic bases. Response costs may include but are not limited to, costs incurred by the United States in overseeing Respondent's implementation of the requirements of this Order, and activities performed by the United States as part of the RI/FS and community relations, including any costs incurred to obtain access. Costs shall include all direct and indirect costs, including but not limited to, time and travel costs of EPA personnel and associated indirect costs, contractor costs, cooperative agreement costs, compliance monitoring, including the collection and analysis of split samples, inspection of RI/FS activities, Site visits, discussions regarding disputes that may arise regarding this Order, review and approval or disapproval of submissions, and costs of doing or redoing any of Respondent's tasks. Summaries Respondent's implementation of this RI/FS Consent Order and which are not inconsistent with the NCP, to Respondent on an annual basis. EPA's accounting of claimed response and oversight costs shall be

accompanied by summaries, including EPA's certified Agency Financial Management System summary data (SPUR Reports), ~~or such other summary as certified by EPA, may serve as a basis for payment demands by EPA.~~ and all necessary supporting documentation, cost summaries and invoices including but not limited to personnel timesheets, travel documents, treasury schedules, scopes of work and monthly contractor invoices.

74. Respondent shall within ~~thirty (30)~~ sixty (60) days of receipt of each accounting, remit a certified or cashier's check for the substantiated amount of costs requested by EPA. Interest shall accrue from the later of: the date payment of a specified amount is demanded in writing; or the date of the expenditure. The rate shall be the rate of interest on investments for the Hazardous Substances Superfund in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a).

75. Checks should be made payable to the Hazardous Substances Superfund and should state the name of the Site, the Site identification number, the account number, and the title and docket number of this Consent Order. Checks should be forwarded to:

U.S. Environmental Protection Agency
Superfund Accounting
P.O. Box 371003M
Pittsburgh, Pennsylvania 15251

76. Copies of the transmittal letter and check should be sent simultaneously to the EPA Project Coordinator.

77. Disputes concerning costs shall be limited to accounting errors and, the inclusion of costs outside the scope of this Consent Order, and the inclusion of costs inconsistent with the NCP. Respondent shall identify any contested costs and the basis of its objection in writing. All undisputed costs shall be remitted by Respondent in accordance with the schedule set forth above. Disputed costs shall be paid ~~into an escrow account by Respondent while any such dispute is pending. Respondent shall have the burden of establishing an EPA accounting error or the inclusion of any cost outside the scope of this Order. Interest shall accrue during any cost, if required, thirty (30) days after resolution of the dispute.~~

XXII. RESERVATIONS OF RIGHTS AND REIMBURSEMENT OF OTHER COSTS

78. EPA reserves the right to bring an action against Respondent under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of all response costs, ~~excluding past costs as set forth in paragraphs 70-72, which are not reimbursed by Respondent, including all past costs, all oversight costs and~~ any future costs ~~7~~ incurred by the United States in connection with the implementation of this Consent Order and/or any response activities at the Site. Respondent reserves all its rights to defend against any claims or actions and its rights to assert any claims against any person or entity under any applicable law.

79. EPA reserves the right to bring an action against Respondent, and/or any other responsible party, to enforce any

provision or requirement of this Consent Order or any requirement developed pursuant to this Consent Order, including, but not limited to, all cost reimbursement requirements ~~7 and the collection of stipulated penalties pursuant to Section XVIII of this Order, and the imposition of statutory penalties pursuant to Section 109 of CERCLA, 42 U.S.C. 9609~~ Consent Order. Respondent reserves all its rights to defend against any claims or actions and its rights to assert any claims against any person or entity under any applicable law.

80. Except as expressly provided in this Consent Order, each party reserves all rights and defenses it may have. Nothing in this Consent Order shall affect EPA's removal, response, enforcement or other statutory and/or regulatory authority including its right to seek injunctive relief, perform response activities, recover stipulated ~~and/or statutory~~ penalties, and/or punitive damages. Respondent reserves all its rights to defend against any claims or actions and its rights to assert any claims against any person or entity under any applicable law.

81. Following satisfaction of this Consent Order, Respondent shall have ~~no resolved~~ its liability to EPA for the work Respondent has performed pursuant to this Consent Order. Respondent is not released from any liability, if any, for any unauthorized activities or response actions taken beyond the scope of this Consent Order, including any unauthorized emergency action or removal activity, any remedial design/remedial action,

or any activities pursuant to Section 121(c) of CERCLA, 42 U.S.C. § 9621(c).

XXIII. DISCLAIMER

82. ~~Except in any judicial or administrative proceeding by EPA or the United States to enforce this Order or any judgment relating to it, the Findings of Fact and By signing this Consent Order and taking action pursuant to its terms, Respondent does not admit, adopt, accept, concede or acknowledge EPA's Findings of Fact, Conclusions of Law and Determinations set forth herein. Furthermore, Respondent's participation in this Consent Order shall not be construed as any admission of liability by Respondent, and shall not be admissible in evidence against Respondent~~ in any judicial or administrative proceeding other than a proceeding by the United States, including EPA, to enforce the Consent Order or a judgment relating to it. Unless otherwise provided in this Consent Order, Respondent retains the right to assert any statutory and/or common law claims it may have against any person or potentially responsible party ~~other than EPA and the United States. Respondent shall not contest the validity or terms of this Order, or the procedures underlying or relating to it in any action brought by EPA or the United States pursuant to this Order.~~

XXIV. OTHER CLAIMS

83. Respondent ~~shall not waives only any right it may have to~~ seek any reimbursement under Section 106(b), 111 and 112 of CERCLA, 42 U.S.C. § 9606(b), 9611 and ~~shall not present any~~ ~~claims pursuant to Section 111 or 112 of CERCLA, 42 U.S.C. 9611,~~ 9612, for costs incurred in complying with this Consent Order. This Consent Order does not constitute any decision on preauthorization of funds under Section 111(a) (2) of CERCLA, 42 U.S.C. § 9611(a) (2). Respondent ~~shall have no statutory or common law claims or counterclaims in law or equity against EPA relating to or arising out of conduct of the RI/FS and/or the implementation of this Order.~~

84. Nothing in this Consent Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, subsidiary or corporation not a signatory to this Consent Order for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, pollutants, or contaminants at, from, or taken to the Site.

~~85. Respondent shall not seek to recover any costs or attorneys fees from EPA or the United States.~~

XXV. FINANCIAL ASSURANCE, INSURANCE AND INDEMNIFICATION

~~86. Respondent shall establish and maintain a financial instrument or trust account or other financial mechanism acceptable to EPA, which shall be funded sufficiently to perform~~

~~the work and all other obligations of this Order, including a margin for cost overruns. Within fifteen (15) days after the effective date of this Order, Respondent shall fund the financial instrument or trust account in the total sum of FIVE HUNDRED THOUSAND DOLLARS (\$500,00.00) for the period beginning with the effective date of the Order through the fourteenth (14th) day of the next quarter of the calendar year. Beginning on the fifteenth (15th) day of said next quarter, and on or before the fifteenth (15th) day of each calendar year quarter thereafter, Respondent shall fund the financial instrument or trust account in an amount deemed sufficient by EPA to perform the work and all other activities required under this Order projected for the succeeding calendar year quarter.~~

~~87. If at any time the net worth of the financial instrument or trust account is insufficient to perform the work and other obligations of this Order for the upcoming quarter, Respondent shall provide written notice to EPA within seven (7) days after the net worth of the financial instrument or trust account becomes insufficient. The written notice shall describe why the financial instrument or trust account is insufficient, and what actions have been or will be taken to fund the financial instrument or trust account in accordance with the requirements of this Order.~~

~~88.—~~

~~A. Prior to the commencement of any work under this Order, Respondent shall secure, and shall maintain in force for the~~

~~duration of this Order, and for two years after the completion of all activities required by this Order, Comprehensive General Liability ("CGL") and automobile insurance, with limits of five (5) million dollars, combined single limit, naming the United States as a co-insured. The CGL insurance shall include Contractual Liability Insurance in the amount of \$500,000 per occurrence, and Umbrella Liability Insurance in the amount of two (2) million per occurrence.~~

~~B. Respondent shall also secure, and maintain in force for the duration of this Order, and for two years after the completion of all activities required by this Order: Professional Errors and Omissions Insurance in the amount of \$1,000,000.00 per occurrence, and Pollution Liability Insurance in the amount of \$1,000,000.00 per occurrence, covering, as appropriate, both general liability and professional liability arising from pollution conditions.~~

~~C. For the duration of this~~

88. For the duration of this Consent Order, Respondent shall satisfy, or shall ensure that Respondent's contractors and subcontractors satisfy, all applicable laws and regulations regarding the provision of employer's liability insurance and workmen's compensation insurance for all persons performing work on behalf of Respondent, pursuant to this Consent Order.

~~D. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering the~~

~~same risks but in a lesser amount, with respect to such contractor or subcontractor, Respondent need provide only that portion of the insurance described above which is not maintained by the contractor or subcontractor.~~

~~E. Prior to commencement of any work under this Order, and annually thereafter on the anniversary of the effective date of this Order, Respondent shall provide certificates of such insurance and a copy of each insurance policy to EPA.~~

89. At least seven (7) days prior to commencing any work under this Consent Order, Respondent shall submit written certification to EPA that all the insurance required by paragraph 88 above, has been obtained as set forth therein.

90. Respondent shall agrees to indemnify and hold the United States, its agencies, departments, agents, and employees harmless from any and all claims or causes of action arising solely from or on account of negligent acts or omissions of Respondent, its employees, agents, servants, contractors, subcontractors, consultants, laboratories, receivers, trustees, successors, or assigns, or any other persons or entities acting on Respondent's behalf, in carrying out any activities pursuant to this Consent Order. The United States or any agency or authorized representative thereof shall not be held as a party to any contract entered into by Respondent in carrying out any activities pursuant to this Consent Order.

XXVI. EFFECTIVE DATE AND SUBSEQUENT AMENDMENT

91. The effective date of this Consent Order shall be five (5) days after the date the Consent Order as signed by EPA is received by Respondent. ~~it is signed by EPA.~~ Except when expressly stated otherwise herein, all time periods referred to in this Consent Order shall be construed as calendar days, rather than "business" or "working" days. Any time period scheduled to begin on the occurrence of an act or event shall begin on the day after the act or event. If the final day of any time period falls on a Saturday, Sunday, or legal holiday ("non-final days"), the time period shall be extended to the next day which is not a non-final day.

92. In addition to the procedures set forth elsewhere in this Consent Order, this Consent Order may be amended by agreement between EPA and Respondent. Such ~~a~~amendments shall be in writing and shall be effective five (5) days after the amendment as signed by EPA is received by Respondent. ~~when signed by EPA.~~ EPA Project Coordinators do not have the authority to sign any amendment to this Consent Order.

93. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent will be construed as relieving Respondent of its obligation to obtain such formal approval as may be required by this Consent Order. Any deliverables, plans, technical memoranda, reports (other than progress reports), specifications, schedules and attachments required by this Consent Order or developed pursuant to this Consent Order,

are, upon approval by EPA, incorporated in, and made an enforceable part of, this Consent Order by this reference.

XXVII. TERMINATION AND SATISFACTION

94. Except as set forth in this paragraph, this ~~Order shall terminate when Respondent demonstrates~~ Consent Order shall be deemed terminated and satisfied sixty days after Respondent notifies EPA in writing and certifies ~~to the satisfaction of EPA~~ that all activities required by this Consent Order, including any additional work, ~~payment of all costs,~~ and any stipulated penalties demanded by EPA, have been performed ~~and unless EPA has approved~~ disapproves the certification set forth in paragraph 95 below. Respondent's obligation to comply with Sections XVI (Record Preservation), XXI (Reimbursement of ~~Response and~~ Oversight Costs), and XXII (Reservations of Rights and Reimbursement of Other Costs), of this Consent Order shall remain in full force and effect ~~without time or other limitation.~~

95. The following certification shall be signed by a responsible official on behalf of Respondent:

"In accordance with 28 U.S.C. § 1746, I certify under penalty of perjury under the laws of the United States that the information contained in and accompanying this certification is true, accurate, and complete to the best of my information and belief after investigation. Dated this ____ day of _____, 199__." "

~~For purposes of this Order, a responsible official is a corporate official in charge of a principal business function.~~

IT IS SO ORDERED, this ____ day of _____, 199_.

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY

By: _____
CHARLES E. FINDLEY, Director
Hazardous Waste Division
EPA Region 10

RESPONDENT hereby consents to the issuance of this CONSENT ORDER, and agrees to abide by each and every provision herein, and to perform each and every task or requirement herein.

By: _____
Name:
Title:
Monsanto Company

Date: _____

SPK.RL2

**STATEMENT OF WORK FOR MONSANTO COMPANY
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY**

INTRODUCTION

Pursuant to the National Oil and Hazardous Substances Contingency Plan, 40 CFR Part 300 (the "NCP") the purpose of this Remedial Investigation/Feasibility Study ("RI/FS") is to assess site conditions and evaluate alternatives to the extent necessary to select a remedy at the Monsanto Company Soda Springs site ("Site"). The RI and FS are interactive and may be conducted concurrently so that the data collected in the RI influences the development of remedial alternatives in the FS, which in turn affects the data needs.

Respondent will conduct this RI/FS and will produce draft RI and FS reports that are in accordance with this statement of work ("SOW"), and are responsive to the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, U.S. EPA, Office of Emergency and Remedial Response, October 1988 ("EPA 1988 Guidance"), and other listed guidances as attached, as well as any additional requirements in the Consent Order. The RI/FS Guidance describes the report format and the report content. The Respondent will furnish all necessary personnel, materials, and services needed, or incidental to, performing the RI/FS, as specified in the Consent Order.

At the completion of the RI/FS, EPA will be responsible for the selection of a Site remedy and will document this selection in a Record of Decision ("ROD"). The remedial action alternative selected by EPA will meet the cleanup standards specified in Section 121 of CERCLA, 41 U.S.C. § 9621; i.e., the selected remedial action will be protective of human health and the environment, will be in compliance with, or include a waiver of, applicable or relevant and appropriate requirements of other laws, will be cost effective, will utilize permanent solutions and alternative treatment technologies or resource recovery technologies, to the maximum extent practicable, and will address the statutory preference for treatment. The final RI/FS report, as adopted by EPA, and the administrative record, will form the basis for the selection of the remedy for the Site, and will provide the information necessary to support the development of the ROD.

As specified in Section 104(a)(1) of CERCLA, 42 U.S.C. § 9604(a)(1), as amended, EPA will provide oversight of Respondent's activities throughout the RI/FS. As specified in the Consent Order, Respondent will support EPA's initiation and conduct of activities related to the implementation of oversight activities.

I. WORK BREAKDOWN STRUCTURE

The initial planning process of the RI/FS and was initiated by EPA prior to issuing special notice. During the initial phases, Site-specific objectives of the RI/FS, and a general management approach for the Site were determined by EPA. The planning process was therefore initiated prior to negotiations between potentially responsible parties ("PRP"s) and EPA, and is continued, repeated as necessary, and refined throughout the RI/FS process. Consistent with the general management approach, the specific project structure has been planned by Respondent and EPA. Respondent will document the specific project plans in a work plan. Because the work required to perform an RI/FS is not fully known at the onset, and is phased in accordance with the Site's complexity and the amount of available information, it may be necessary to modify the work plan in accordance with the Consent Order during the RI/FS to satisfy the objectives of the study.

The initial plan for the RI/FS based on available information is to gather additional data of sufficient quantity and quality concerning contaminants in soil, air and groundwater to conduct a Human Health and Ecological Risk Assessment ("Risk Assessment"), to determine extent and transport of contaminants, and to select the most appropriate remedial action by conducting a Feasibility Study. EPA will prepare the Risk Assessment, provided however that if EPA's present policy on EPA preparation of Risk Assessments is altered by either judicial or agency action, Respondent will be provided a reasonable opportunity to submit to EPA a Risk Assessment Work Plan and, upon EPA approval, to prepare a Risk Assessment in accordance with the approved Risk Assessment Work Plan.

The strategy for the general management of the Site will include a sampling strategy to be agreed upon by EPA and Respondent which meets the above objectives based on the nature and extent of contamination at the Site. The data generated from the sampling effort will then be used to meet the requirements of an RI/FS which are outlined in this Statement of Work.

The scope of work for the Respondent's remedial investigation/feasibility study will, for the purposes of this consent order, be conducted in general accordance with the following work breakdown structure:

A. Phase I Remedial Investigation--Site Characterization

Task 1--Contaminant Source, Meteorological, Hydrological, Geological, Pedological, Hydrogeological, and Ecological Data Compilation

Task 2--Contaminant Source, Meteorological, Hydrological, Geological, Pedological, Hydrogeological, and Ecological Data Evaluation

Task 3--Contaminant- and Location-Specific Environmental Standards, Requirements, Criteria, and Limitations Identification

Task 4--Data Needs Evaluation

Task 5--Preliminary Site Characterization Summary Report Development

B. Phase I Feasibility Study--Remedial Alternatives Development and Preliminary Screening

Task 1--Remedial Action Objectives Development

Task 2--General Response Actions Development

Task 3--Potential Remedial Technologies Identification

Task 4--Technology Process Options Evaluation

Task 5--Remedial Alternatives Assembly

Task 6--Action-Specific Environmental Standards, Requirements, Criteria, and Limitations Identification

Task 7--Alternatives Screening Evaluation

Task 8--Data Needs Reevaluation

Task 9--Remedial Alternatives Development and Preliminary Screening Memorandum Development

C. Phase II Remedial Investigation/Feasibility Study Planning

Task 1--Work Plan Development

Task 2--Safety and Health Plan Development

Task 3--Community Relations Plan Development

D. Phase II Remedial Investigation--Additional Site Characterization and Treatability Investigation

Task 1--Contaminant Source Investigation and Data Evaluation

Task 2--Meteorological Investigation and Data Evaluation

Task 3--Hydrological Investigation and Data Evaluation

Task 4--Geological Investigation and Data Evaluation

Task 5--Pedological Investigation and Data Evaluation

Task 6--Hydrogeological Investigation and Data Evaluation

Task 7--Ecological Investigation and Data Evaluation

Task 8--Contaminant- and Location-Specific Environmental Standards, Requirements, Criteria, and Limitations Verification

Task 9--Treatability Investigation and Data Evaluation

Task 10--Preliminary Draft Remedial Investigation Report Development

Task 11--Environmental Protection Agency Risk Assessment Report Review

Task 12--Draft Remedial Investigation Report Development

E. Phase II Feasibility Study--Remedial Alternatives Analysis

Task 1--Remedial Action Objectives Refinement and Remedial Alternatives Definition

Task 2--Detailed Remedial Alternatives Analysis

Task 3--Action-Specific Environmental Standards, Requirements, Criteria, and Limitations Verification

Task 4--Comparative Analysis Report Development

Task 5--Comparative Analysis Presentation

Task 6--Draft Feasibility Study Report Development

II. PERFORMANCE

All remedial investigation/feasibility study work performed under the Consent Order shall be conducted consistent with, and will be deemed to be consistent with the NCP. To attain this goal, the following performance standards shall be applied to the project or specific components of the project, as appropriate:

A. Phase I Remedial Investigation--Site Characterization

All first phase remedial investigation work shall conform to Part 300.430(a)(1)(ii)(C), (b), and (d)(1) of the NCP, and

with the Environmental Protection Agency's policy of 'necessary and sufficient,' as stated in Section 7.2.3 of Guidance on Remedial Investigations Under CERCLA, EPA/540/G-85/002, U.S. EPA Office of Emergency and Remedial Response and Office of Waste Programs Enforcement ("EPA 1985 Guidance"), and as reiterated in Section 1.1 of EPA 1988 Guidance.

The Preliminary Site Characterization Summary Report will, to the extent practicable with existing information, provide the necessary information required under Part 300.430(d) of the NCP. It will also serve to provide the scoping information required under Part 300.430(b)(1), (2), and contaminant- and location-specific portions of (9) of the NCP.

B. Phase I Feasibility Study--Remedial Alternatives Development and Preliminary Screening

All first phase feasibility study work shall conform to Part 300.430(a)(1)(iii), (b), and (e)(1) of the NCP, and with the Environmental Protection Agency's policy on treatment alternatives for sites with large volumes of low concentrated wastes, as stated in Section 4.1.3.1 of EPA 1988 Guidance.

The Remedial Alternatives Development and Preliminary Screening Memorandum will, to the extent practicable with existing information, provide the necessary information required under Part 300.430(e)(1) through (8) of the NCP. It will also serve to provide the scoping information required under Part 300.430(b)(3) and action-specific portions of (9) of the NCP.

C. Phase II Remedial Investigation/Feasibility Study Planning

Three project plans will be developed for the second phase of the remedial investigation/feasibility study: a Work Plan, a Safety and Health Plan, and a Community Relations Plan.

The Work Plan will provide the scoping information required under Part 300.430(b)(5) and (8) of the NCP for any further site characterization or treatability investigation activities that may be needed. The elements of a field sampling plan [Part 300.430(b)(8)(i)] will be incorporated into the body of the Work Plan and the Quality Assurance Project Plan [Part 300.430(b)(8)(ii)], which will be appended to the Work Plan. All groundwater data supplied to EPA must be in strict adherence with the Region 10 Groundwater Data Management Order R/O 7500.1 dated August 15,

1989, a copy of which is attached to this SOW as Attachment 1.

The Safety and Health Plan will provide the scoping information required under Part 300.430(b)(6) of the NCP.

The Community Relations Plan will provide the information required under Part 300.430(c)(2)(ii) of the NCP.

D. Phase II Remedial Investigation--Additional Site Characterization and Treatability Investigation

All second phase remedial investigation work shall conform to Part 300.430(a)(1)(ii)(C), (b), and (d)(1) of the NCP, and with the Environmental Protection Agency's policy of 'necessary and sufficient,' as stated in Section 7.2.3 of EPA (1985), and as reiterated in Section 1.1 of EPA (1988).

The Preliminary Draft Remedial Investigation Report and the Draft Remedial Investigation Report will expand upon the Preliminary Site Characterization Summary Report to provide the necessary information required under Part 300.430(d) of the NCP, including an evaluation of any treatability investigation activities undertaken. The Draft Remedial Investigation Report will incorporate the results of the Environmental Protection Agency's site risk assessment.

E. Phase II Feasibility Study--Remedial Alternatives Analysis

All second phase feasibility study work shall conform to Part 300.430(a)(1)(iii), (b), and (e)(1) of the NCP, and with the Environmental Protection Agency's policy on treatment alternatives for sites with large volumes of low concentrated wastes, as stated in Section 4.1.3.1 of EPA 1988 Guidance.

The Comparative Analysis Report and the Draft Feasibility Study Report will expand upon the Remedial Alternatives Development and Preliminary Screening Memorandum to provide the necessary information required under Part 300.430(e) of the NCP.

III. SCHEDULE

All remedial investigation/feasibility study work performed under the Consent Order shall be conducted in accordance to the following schedule. However, this schedule may be amended or modified as set forth in the Consent Order.

A conceptual time line for the remedial investigation/feasibility study is provided in Figure 1. This conceptual time line assumes a nine (9) month duration for development of the Preliminary

Draft Remedial Investigation Report from the time of receipt of Environmental Protection Agency approval on the second phase project plans. The actual duration for this element of the project, however, will be established in the approved second phase project plans.

A. Review and Revision of Deliverables

The following documents constitute deliverables that are subject to review and potential revision:

- Preliminary Site Characterization Summary Report
- Remedial Alternatives Development and Preliminary Screening Memorandum
- Phase II Remedial Investigation/Feasibility Study Project Plans
- Preliminary Draft Remedial Investigation Report
- Draft Remedial Investigation Report
- Comparative Analysis Report
- Draft Feasibility Study Report.

B. Phase I Remedial Investigation--Site Characterization

The Preliminary Site Characterization Summary Report shall be submitted for Environmental Protection Agency review within ninety (90) days of the date upon which the Consent Order becomes effective.

C. Phase I Feasibility Study--Remedial Alternatives Development and Preliminary Screening

The Remedial Alternatives Development and Preliminary Screening Memorandum shall be submitted for Environmental Protection Agency review within ninety (90) days of receipt of Environmental Protection Agency review comments on the Preliminary Site Characterization Summary Report.

D. Phase II Remedial Investigation/Feasibility Study Planning

All second phase project plans shall be submitted for Environmental Protection Agency review within ninety (90) days of receipt of Environmental Protection Agency review comments on the Remedial Alternatives Development and Preliminary Screening Memorandum.

E. Phase II Remedial Investigation--Additional Site Characterization and Treatability Investigation

The Preliminary Draft Remedial Investigation Report will be submitted for Environmental Protection Agency review within the terms of the schedule contained in the approved project plans.

The Environmental Protection Agency shall submit its draft Risk Assessment for Respondent's comments within sixty (60) days of the Environmental Protection Agency's approval of the Preliminary Draft Remedial Investigation Report. Respondent shall provide written comments to the Environmental Protection Agency on the draft Risk Assessment within thirty (30) days of Respondent's receipt of such Risk Assessment.

The Draft Remedial Investigation Report will be submitted for Environmental Protection Agency review within sixty (60) days of Respondent's receipt of the Environmental Protection Agency's completed Risk Assessment and will incorporate such Risk Assessment.

F. Phase II Feasibility Study--Remedial Alternatives Analysis

The Comparative Analysis Report shall be submitted for Environmental Protection Agency review within ninety (90) days of receipt of Environmental Protection Agency review comments on the Draft Remedial Investigation Report.

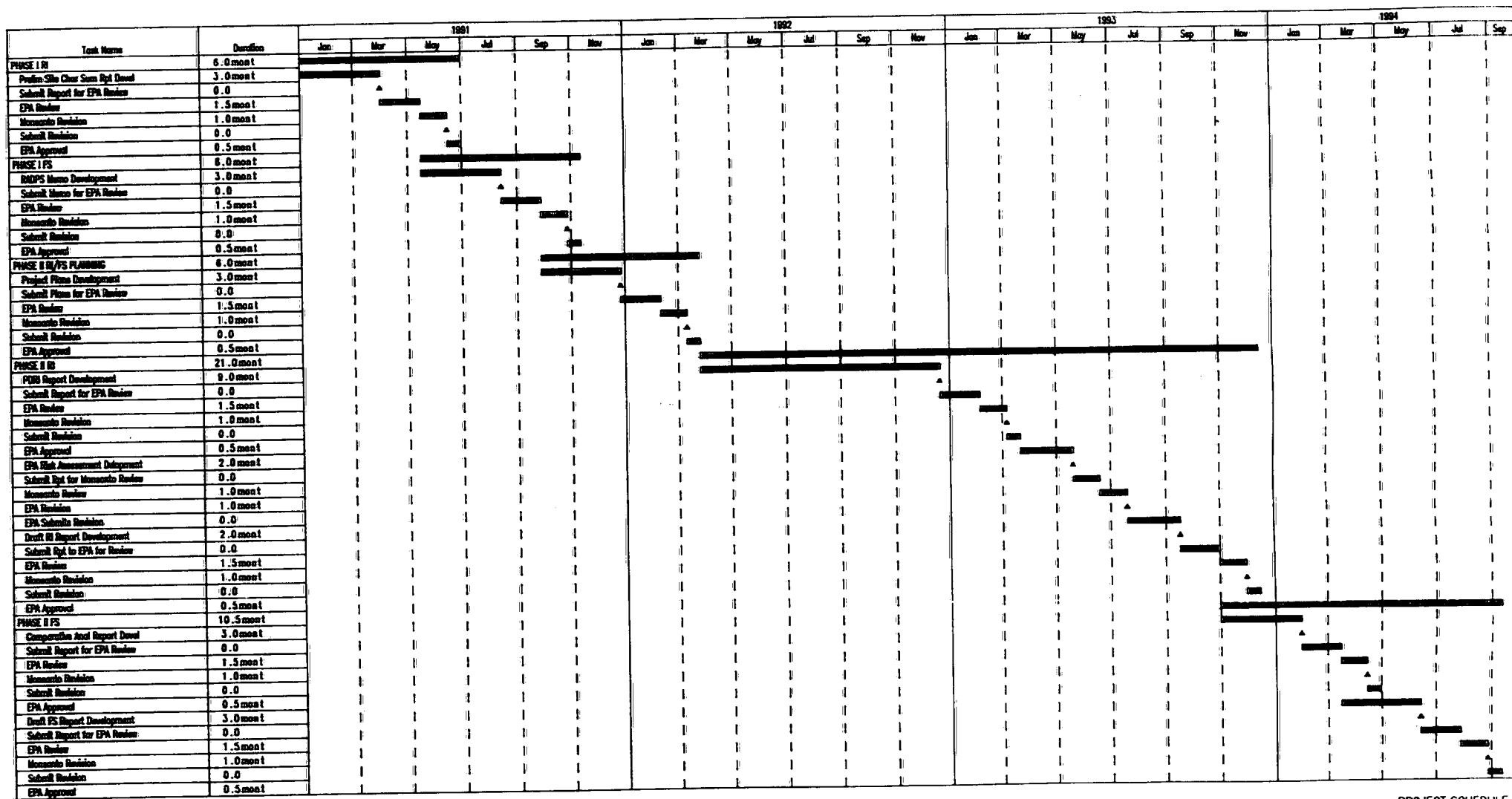
The Comparative Analysis Presentation shall be made to the Environmental Protection Agency within twenty-one (21) days of the submittal of the Comparative Analysis Report.

The Draft Feasibility Study Report shall be submitted for Environmental Protection Agency review within ninety (90) days of receipt of Environmental Protection Agency review comments on the Comparative Analysis Report.

IV. REFERENCES CITED

EPA, 1988, *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA*, EPA/540/G-89/004, U. S. Environmental Protection Agency, Office of Emergency and Remedial Response, Washington, D. C.

EPA, 1985, *Guidance on Remedial Investigations Under CERCLA*, EPA/540/G-85/002, U. S. Environmental Protection Agency, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, Washington, D. C.



PROJECT SCHEDULE
 REMEDIAL INVESTIGATION/FEASIBILITY STUDY
 MONSANTO SODA SPRINGS FACILITY

ENVIRONMENTAL
PROTECTION
AGENCY

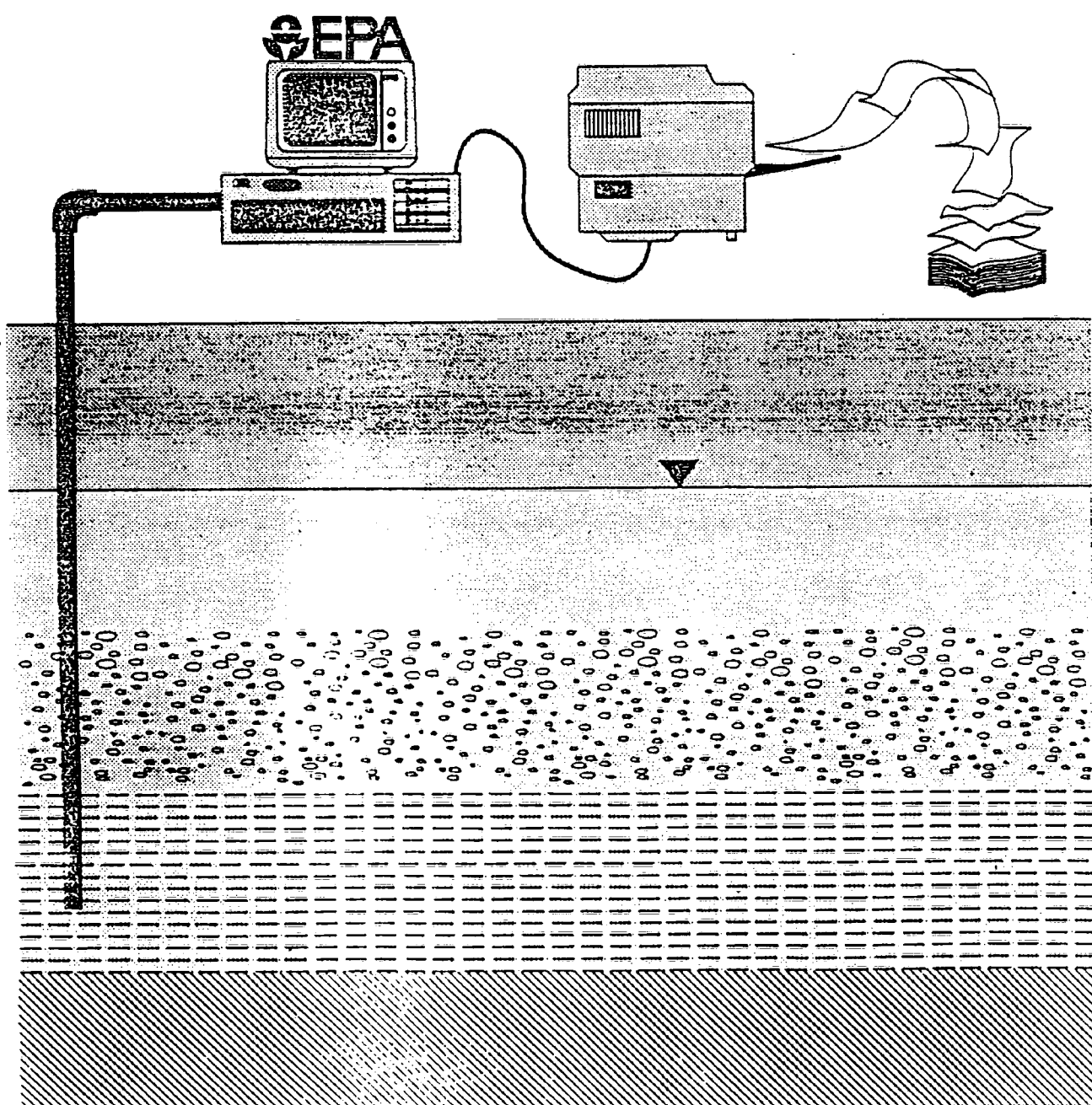
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August 15, 1989

WATER - GENERAL

REGION 10
GROUND-WATER DATA MANAGEMENT



ORDER

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1.0 PURPOSE

The purpose of this Order is to establish consistent procedures for organizing, reporting, transmitting, storing and retrieving ground-water data. Ground-water data management procedures implemented under this Order will significantly enhance the ability of EPA to efficiently administer programs generating and using ground-water information. Implementation of this Order will improve the efficiency and effectiveness of EPA's resources and the quality and timeliness of management decisions.

2.0 APPLICABILITY

This Order applies to all ground-water data collection activities directly carried out by EPA staff or EPA contractors, including research and development, enforcement, and permit issuance. Provisions of the Order apply to EPA personnel, contractors or consultants to EPA, and to other entities that are collecting ground-water data at the direct request of EPA.

This Order does not apply to state/local grantees, or states collecting data under EPA delegated or other state programs. Also this Order does not apply to other federal agencies acting outside of the scope of EPA authority. However, federal, state and local agencies are encouraged to adopt similar data management policies to facilitate efficient sharing of ground-water data within the states of EPA Region 10.

3.0 BACKGROUND

Numerous EPA programs involve the collection and assessment of ground-water data. EPA is frequently responsible for making highly sensitive decisions regarding the disposition of ground-water resources.

Currently, very little of the ground-water data collected by or requested by EPA is available in a readily usable form. Ground-water data submitted to EPA is virtually always in the form of voluminous paper reports. This format precludes the ability of staff to perform rapid analysis of spatial and temporal trends; instead, staff must engage in laborious and time-consuming page-by-page hand interpretation and assessment of the information. In addition, the evaluation of ground-water data cannot always be effective because of improper or missing location coordinates, inadequate information on physical characteristics of wells, and inconsistent sample analytical and quality assurance data. Regional project managers and technical staff are continually at a disadvantage during technical meetings with the regulated community because of the unavailability of a centralized, standardized regional ground-water data repository upon which analytical tools for data interpretation and presentation can be applied. In most cases, the regulated community data-generating entities already use some type of computer database files for storage of ground-water data for their own internal purposes. Actual data, however, are usually submitted to EPA in the form of paper copies of computer printouts.

This Order will establish appropriate procedures to ensure that ground-water data submitted to EPA is encoded, stored, and presented in a magnetic media format (i.e., diskette or tape) so that data can be readily downloaded into an EPA data system. Implementing this Order will preclude the necessity of laborious hand-interpretation and allow rapid assessment by EPA staff.

This Order will also provide a new capability for EPA to rapidly perform regional summaries of environmental quality. The availability of a centralized ground-water data system will allow EPA to quickly summarize and present analytical data portraying the condition of ground-water resources of EPA Region 10. EPA will need this capability to effectively tabulate Environmental Indicators, a national effort which will receive increased emphasis during the next few years. These new capabilities will also enhance EPA's ability to conduct regional risk assessments.

4.0 DEFINITIONS

4.1 Documentation:

A written record furnishing information that a procedure has been performed and how it was performed.

4.2 Ground-water data:

For the purposes of this Order, ground-water data is comprised of two categories: Sampling station location and descriptive information, and sample analytical data. The specific components of each of these categories are given respectively in Sections 6.2.1.1 and 6.2.2.1 of this Order. These data elements are derived from the EPA National Order No. 2150, "Minimum Set of Data Elements for Ground Water."

4.3 Generation/collection of ground-water data:

The construction of a ground-water monitoring well; the collection of a water sample from such a monitoring well, a drinking water well, or other type of well, springs, or any other source of ground water; performance of chemical, physical, and/or biological analyses by or under the direction of EPA.

4.4 Location:

The exact location of a ground-water sampling station, usually a well, as determined by standard surveying procedures. The location may be given in Latitude and Longitude coordinates, accurate to within one-tenth of a second; or, in Universal Transverse Mercator (UTM) system coordinates (accurate to the nearest meter), or in State Plane System coordinates (accurate to the nearest foot).

4.5 Project manager:

Any EPA staff member responsible for coordinating activities on a specific site, group of sites, or investigation projects where collection of ground-water data is conducted. This includes but is not limited to Superfund and RCRA site managers, on-scene coordinators, special study coordinators, etc.

4.6 Regulated community:

Any public or private entity being regulated under one or more laws or regulations listed under Subsection 4.2. This includes, but is not limited to potentially responsible parties, federal facilities, specific industries, public utilities, municipalities, etc.

4.7 Site:

- 4.7.1 Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund): Hazardous waste site.
- 4.7.2 Resource Conservation and Recovery Act (RCRA) Facility: Facility.
- 4.7.3 National Pollution Discharge Elimination System (NPDES): Discharge Point and vicinity where ground-water monitoring activities are conducted.
- 4.7.4 Public Water Supply (PWS): Wellhead or key well in a well field, or a reservoir outlet.
- 4.7.5 Underground Injection Control (UIC): Wellhead or a key UIC well in a wellfield.
- 4.7.6 Underground Storage Tanks, Leaking Underground Storage Tanks (LUSTs): Tank areas where ground-water monitoring activities are conducted.

4.8 Station:

A well, spring, or other sampling point at which a ground-water sample is collected.

5.0 RESPONSIBILITIES

The following individuals, groups, or entities shall be responsible for conducting the following tasks and implementing the provisions of this Order described in Section 6, "Data Management Procedures".

- 5.1 The Region 10 Ground-Water Task Force will provide oversight of this Order by conducting annual assessments of the operating procedures and recommending modifications if appropriate.
- 5.2 EPA Division Directors shall be responsible for the implementation of this Order within their respective Divisions, and shall arrange for appropriate training and orientation opportunities for their staff.
- 5.3 The Environmental Services Division (ESD), Laboratory Branch, shall encode and input the results of all ground-water sample analyses performed at the Laboratory (including associated assessment of quality of data). Data shall be entered into the Laboratory Sample Data Management System. In addition, for projects conducted directly by EPA staff, the Laboratory shall encode and input ground-water data sample analyses performed by contract laboratories.

- 5.4 ESD, Ambient Monitoring and Analysis Branch (AMAB), shall have responsibility in the following areas:
- 5.4.1 AMAB shall provide guidance and training as appropriate to EPA staff, consultants, contractors, or others, upon request, to ensure that ground-water data submitted to EPA is properly encoded in accordance with procedures detailed in Section 6.
 - 5.4.2 AMAB shall be responsible for determining the disposition of the data received by EPA, and transferring data to the appropriate EPA data management system (e.g., STORET; Region 10 Ground-Water Site Inventory database; the Geographic Information System, or the Ground-Water Workstation).
 - 5.4.3 AMAB shall effect the transfer of ground-water data from the Laboratory Sample Data Management System to a data system in use at the Regional Office (see 5.4.2, above), for data generated as a result of sampling activities conducted directly by EPA staff. In such cases AMAB shall be responsible for entry of sampling station descriptive information into the appropriate related database.
 - 5.4.4 AMAB shall code and enter historical data, and data collected under ongoing agreements, in accordance with the provisions of this Order, and as time and resources allow.
- 5.5 ESD, Office of Quality Assurance shall consider this Order when reviewing sampling plans and, upon receipt and review of data, make recommendations for data quality and usability.
- 5.6 All EPA field staff collecting or generating ground-water data in the field shall be responsible for tabulating sampling station descriptive information described in Section 6. Such tabulations must be submitted to AMAB.
- 5.7 Hazardous Waste Division (HWD), Superfund Branch staff (Site Managers and others) shall, where appropriate, require that ground-water data management procedures described in Section 6 be implemented in all actions involving collection of ground-water data. These actions include all of the following:
- Preliminary Assessments/Site Investigations
 - Remedial Investigations
 - Feasibility Studies
 - Remedial Design/Remedial Action
 - Operation and Maintenance

The procedures shall be required for all ground-water data collection activities conducted under the following circumstances:

- Directly by EPA;
- By any contractors or consultants tasked by EPA;

- By 'potentially responsible parties' acting under terms of a consent decree or order;
- By federal facilities acting under EPA direction or under terms of a federal facility agreement and/or consent order.

Implementation of the procedures shall be effected by incorporating appropriate language directly into contracts, work plans, work assignments, work orders, consent decrees, consent orders, interagency agreements, or other appropriate documents.

- 5.8 HWD, Superfund Branch on-scene coordinators shall, where appropriate, require implementation of Section 6 data management procedures for all data collected during the course of a response to an emergency incident or during an immediate removal action.
- 5.9 HWD, Waste Management Branch staff (i.e. RCRA permit writers, compliance officers, and others) shall, where appropriate, require implementation of Section 6 data management procedures for all actions involving collection of ground-water data. These include all of the following:
- RCRA Facility Assessments
 - RCRA Facility Investigations
 - Corrective Measures Studies
 - Corrective Measures Implementation
 - Any other permit provision or compliance/enforcement action.
- 5.10 Water Division and Operations Offices LUST/UST coordinators and staff shall require implementation of Section 6 data management procedures for all tank investigations and clean-ups that involve generation of ground-water data.
- 5.11 Water Division and Operations Offices NPDES program staff shall incorporate Section 6 data management provisions into any NPDES permit language that requires collection of ground-water monitoring data.
- 5.12 Water Division, Drinking Water Programs Branch staff and Office of Ground Water staff shall require implementation of Section 6 data management procedures for all special projects that involve collection of ground-water data. Examples of such projects are:
- High Plains Groundwater Recharge Demonstration Program
 - Occasional special drinking water contamination studies
 - Underground Injection Control Program monitoring

6.0 DATA MANAGEMENT PROCEDURES**6.1 GENERAL PROCEDURES**

A data management plan shall be prepared for all EPA Region 10 activities involving ground-water sampling and analysis of data collected in the field. The plan shall incorporate the general provisions given in subsections 6.1.1 through 6.1.5. Data encoded and stored in accordance with subsections 6.1.1 through 6.1.5 shall be transferred to EPA in consultation with ESD AMAB data management staff. The data management plan shall be subject to EPA approval. AMAB will provide review assistance to all other EPA units reviewing data management plans.

6.1.1 A unique identification code shall be assigned to all monitoring and sampling stations.

6.1.2 Location data and descriptive information shall be recorded and encoded for all monitoring and sampling stations.

6.1.3 All sample analytical results, field measurements, and observations must be identified, recorded, encoded, and stored in accordance with one of the options given in Section 6.2.

6.1.4 Analytical results and other observations shall be correlated with respective sampling station location and descriptive information, by use of common identification codes assigned to station locations.

6.1.5 Location data, descriptive information, analytical results, field measurements, and any other observations of information recorded shall be encoded and stored in accordance with Section 6.2.

6.2 DETAILS OF DATA MANAGEMENT PROCEDURES**6.2.1 Station Location and Descriptive Information****6.2.1.1 Descriptive Information Categories**

All station location and descriptive information shall be tabulated, encoded, and entered into a database (or database compatible file system). The following categories of information (fields) are required for each sampling station. (These fields are those described in the EPA National Order No. 2150, "Minimum Set of Data Elements for Ground Water.")

- a. Unique station identification code number: a 1 to 12 digit alphanumeric code
- b. Location (see Definitions, Subsection 4.4)

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- c. Method of determination of location
- d. Elevation, reference point (for example, top of casing) and datum used
- e. Sampling station use (e.g., drinking water well, monitoring well, etc.)
- f. Depth of well at completion
- g. Depth to top of open interval
- h. Depth to bottom of open interval
- i. Availability and location of well log
- j. Type of well log
- k. Date of installation or construction
- m. Water level at time of installation or construction
- n. Depth to water at time of installation or construction
- o. State Federal Information Procedures System (FIPS) code
- p. County FIPS code
- q. Any additional fields contained in the Region 10 Ground Water Site Inventory (GWSI) Database are optional

6.2.1.2 Descriptive Information Encoding and Storage Procedures

The data assigned to each field shall be entered into one of several types of database structures, described as follows: (All fields must be in EPA-specified formats and units. A data element guidance document will be provided by EPA to data generators).

- a. (Preferred option) The Region 10 GWSI dBase III+ database - Region 10 will provide the database shell upon request, before data entry
- b. Any alternative dBase III+ compatible file
- c. An ASCII comma delimited file or ASCII fixed format (dBase SCF) file, upload compatible to dBase III+

- d. A Lotus-compatible spreadsheet with fields across top (i.e. fields are columns)

6.2.2 Sample Analytical and Water-Level Data

6.2.2.1 Categories (Fields)

All sample analytical data and water level data shall be tabulated, encoded, and entered into a database (or database compatible file system). The following categories of information (fields) are required for each sampling event at each station. (These fields are those described in the EPA National Order No. 2150, 'Minimum Set of Data Elements for Ground Water.')

- a. Station location identification code
- b. Date of sampling event
- c. Sample identification code
- d. Agency requesting sampling data (usually EPA)
- e. Analytical parameters measured (compound names, and respective STORET parameter codes, or CAS numbers)
- f. Concentration (or other) value of parameter measured
- g. Confidence factor (field and lab quality assurance data qualifiers)
- h. Measurement quantification
- i. Depth to water at time of sample collection

6.2.2.2 Sample Analytical and Water Level Data Encoding and Storage Procedures

- a. PC STORET/STORET compatible database or data storage cards (EPA will provide database shell);
- b. Lotus spreadsheet compatible with EPA Lotus/STORET conversion utilities;
- c. dBase file compatible with EPA dBase/STORET conversion utilities;
- d. Other formats as approved by EPA AMAB data management staff.

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7.0 EFFECTIVE DATE

7.1 The effective date for this Order is October 1, 1989.

8.0 REFERENCES

8.1 EPA National Order NO. 2150, 'Minimum Set of Data Elements for Ground Water'.

20161
Date

10-1-89
Date

Clark Gaulding
Management Division Director

Robie G. Russell
Regional Administrator

Attachment 2 has been removed due to size. Please contact William Wright of Golder Associates Inc., 4104-148th Avenue NE, Redmond (Seattle), Washington 98052, phone 206/883-0777 if a copy is desired.

Statement of Consolidated Financial Position

(Dollars in millions, except per share)

At December 31,

Assets	1989	1988
Current Assets:		
Cash, time deposits and certificates of deposit	\$ 198	\$ 203
Short-term securities, at cost which approximates market	55	18
Trade receivables, net of allowances of \$23 in 1989 and \$28 in 1988	1,309	1,234
Miscellaneous receivables and prepaid expenses	295	284
Deferred income tax benefit	194	188
Inventories	1,197	1,170
Total Current Assets	3,248	3,097
Intangible Assets , net of accumulated amortization of \$1,029 in 1989 and \$798 in 1988	1,682	1,790
Investments in Affiliates	204	205
Other Assets	297	223
Property, Plant and Equipment:		
Land	105	111
Buildings	1,100	1,122
Machinery and equipment	5,370	5,388
Construction-in-progress	362	305
Total property, plant and equipment	6,937	6,926
Less accumulated depreciation	3,764	3,780
Net Property, Plant and Equipment	3,173	3,146
Total Assets	\$8,604	\$8,461

Liabilities and Shareowners' Equity

Current Liabilities:		
Accounts payable	\$ 514	\$ 545
Wages	223	208
Income and other taxes	126	124
Miscellaneous accruals	554	547
Short-term debt	505	556
Total Current Liabilities	1,922	1,980
Long-Term Debt	1,471	1,408
Deferred Income Taxes	621	588
Other Liabilities	649	685
Shareowners' Equity:		
Common stock — authorized, 200,000,000 shares, par value \$2; issued, 82,197,097 shares in 1989 and 1988	164	164
Additional contributed capital	877	874
Accumulated currency adjustment	24	52
Reinvested earnings	4,120	3,662
Treasury stock, at cost (16,050,656 shares in 1989 and 13,364,917 shares in 1988)	(1,244)	(952)
Total Shareowners' Equity	3,941	3,800
Total Liabilities and Shareowners' Equity	\$8,604	\$8,461

The above statement should be read in conjunction with pages 39 through 44 of this report

Statement of Consolidated Income

(Dollars in millions, except per share)

	1989	1988	1987
Net Sales	\$8,681	\$8,293	\$7,639
Cost of goods sold	5,035	4,972	4,755
Gross Profit	3,646	3,321	2,884
Marketing expenses	1,154	1,013	918
Administrative expenses	516	474	424
Technological expenses	672	648	615
Amortization of intangible assets	226	231	225
Restructuring expense (income) - net			(32)
Operating Income	1,078	955	734
Interest expense	(182)	(174)	(172)
Interest income	57	46	42
Other income - net	62	66	69
Income Before Income Taxes	1,015	893	673
Income taxes	336	302	237
Net Income	\$ 679	\$ 591	\$ 436
Earnings per Share	\$10.03	\$ 8.27	\$ 5.63

The above statement should be read in conjunction with pages 39 through 44 of this report.

Key Financial Statistics

	1989	1988	1987
Percent Change from Prior Year:			
Net Sales	5%	9%	11%
Operating Income	13	30	16
Net Income	15	36	1
Earnings per Share	21	47	1
As a Percent of Net Sales:			
Gross Profit	42	40	38
Marketing, Administrative and Technological Expenses	27	26	26
Research and Development Expenses	7	7	7
Operating Income	12	12	10
Net Income	8	7	6
Effective Income Tax Rate	33	34	35
Return on Shareowners' Equity	17.6	15.4	11.4